





## SCHOLARSHIP ON CAMPUS

2024-2025

New York City College of Technology 285 Jay Street Brooklyn, NY 11201

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**MESSAGE FROM REGINALD BLAKE** Associate Provost and Dean of Curriculum & Research

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ity Tech is uniquely positioned to understand and address critical issues relevant to the city, state, and world, and to facilitate successful pathways for existing and emerging talent. An integrated research and creative works organization and infrastructure will manifest in effective and sustainable impacts to facilitate our solving the most pressing regional and global issues. Through an innovative, strategic framework, we will focus our efforts on strengthening the vibrant

discovery, creative works, and innovation ecosystem across the college; we will gain renown as a national and global leader in public impact research; we will cultivate the next generation of diverse scholars and thinkers; and our efforts will culminate in important societal and economic impacts.

Best Regards,

**Reginald Blake** 

**Associate Provost** 

Dean of Curriculum & Research

### **VISION**

Design a vibrant research and innovation ecosystem of scholarly and creative works that is flexible and increases our reputation as a world-class urban research center/college with broad societal impacts.

### MISSION

To nurture researcher talent by giving researchers the resources, infrastructure, and supports that they need to do innovative high-impact research; assure funders that research is conducted with integrity and compliance; and to create pathways for City Tech discoveries to impact the world.

### **VALUES**

Integrity, excellence, inclusion, collaboration, innovation, societal impact

### **FIVE STRATEGIC PILLARS**

- Invest-in and empower our researchers, scholars, innovators, and entrepreneurs
- Gain renown as a leader in public-impact convergence research
- Strengthen the research and innovation infrastructure
- Accelerate the translation of discoveries for economic and societal impact
- Aggressively seek funding from all sources (internal, external, local, federal, private)

o advance these aspirations, AP Blake announced the inauguration of City Tech's Research Council and described some of its objectives: to coordinate research support activities under one umbrella; to change the landscape and culture of research at City Tech while retaining focus on the robust involvement of our students; to facilitate growth in funding, encourage proposal submissions, support proposal excellence, and coordinate with overall institutional goals; to encourage a pipeline of ideas and abstracts so proposals are in the pipeline when solicitations come available; to conduct a survey of needs and ideas from the college community; to foreground, highlight and celebrate scholarly activities and accomplishments; to garner and encourage student participation; to act as a single institution in surfacing and encouraging priority research efforts; to explore how to better support research and creative activity; and to disseminate and

create opportunities to present and discuss with colleagues, such as a newsletter, expanded web presence, roundtable, and other venues for exchange and collaboration.

In the past two years, the Research Council organized a series of grant-writing workshops, developed an expanded draft website, initiated the Community Roundtable for exchange of ideas and feedback, begun a department liaison initiative, and inaugurated an annual publication and expanded annual celebration of scholarship on campus.

Moreover, under the auspices of the Research Council, City Tech established an MOU with the Brookhaven National Laboratory and has begun to work on a new MOU with the New York State Department of Environmental Conservation. An alliance with the National Center for Atmospheric Research was formed, and a stronger (more minding) partnership with CUNY's Advanced Science Research Center was initiated.

# ESEARCH COUNCIL MEMBERS

### Justin Vazquez-Poritz, Dean of Arts & Sciences Maureen Archer-Festa, Dean of Professional Studies Hong Li, Interim Dean, School of Technology and Design

Viviana Acquaviva

Ralph Alcendor

Marzieh Azarderakhsh

Illya Azaroff

Ann Delilkan

Jeannette Espinoza

Javiela Evangelista

Andrea Ferroglia

Gaffar Gailani

Evgenia Giannopoulou

Patricia Gorkhover

Katherine Gregory

Sitaji Gurung

Roman Kezerashvili

Pegah Khosravi

Khalid Lachheb

Sean Macdonald

A. F. Patricia Medina

Benito Mendoza

David Micklos

Nazanin Hedayat Munroe

Hamidreza Norouzi

Giovanni Ossola

Diana Samaroo

David Sanchez Jimenez

Subhendra Sarkar

Jeremy Seto

David Smith

Johann Thiel

Daniela Vladutescu

Dan Wong

The Scholar on Campus is awarded annually to a faculty member demonstrating exceptional scholarship contributions to the community. Founded in 1983, this program was administered by the PDAC. The biographical sketches of past Scholars on Campus and highlights of their scholarly achievements may be viewed at Scholar on Campus.



**Suzanne Maynard Miller has** worked in the theater business since 1989, doing everything from acting, directing, and writing to building sets, hanging lights, and running the box office. But it wasn't until she started teaching at City Tech that she discovered her passion for writing plays for young audiences.

Miller's most recent work, Mesmerized: A Ben Franklin Science & History Mystery is a historically-based play inspired by a children's book by Mara Rockliff exploring the scientific method, critical thinking, and the power of the mind. This criticallyheralded play opened in the fall of 2023 at Chicago Children's Theatre and was extended due to popular demand; it is published and licensed by <u>Plays for New</u> Audiences. Other recent projects include: contributions to How to Teach a Play: Essential Exercises for Popular Plays, published in 2020 by Bloomsbury; a musical stage adaptation of David McKee's Elmer (with composer Allison Leyton-Brown - Rockefeller Productions and Joseph Patrick Presents, Toronto, December 2017; UK, Winter 2018); Leo Lionni's Frederick (with composers Sarah

## CHOLAR ON CAMPUS

Durkee and Paul Jacobs - Omaha's Rose Theater, April 2014; Chicago Children's Theatre, October-November 2014; Dramatic Publishing 2015; "Distinguished Play Award," American Alliance for Theatre & Education, 2016; sold-out remount in Chicago in and award-winning production in California, 2018); the musical stage adaptation of the popular children's book series Pete the Cat (with composer Allison Leyton-Brown, commissioned by the Rose Theater, September 2015); and the new play No Place for a Man. Previously Miller developed the musical Kissing Frogs at Bridge2Broadway, Orange County School of the Arts, July 2013.

Before joining the English Department in 2013, Miller taught writing and theater courses at Brown University, the Rhode Island School of Design, and Hunter College/ CUNY. Miller has been an artist-inresidence in the Seattle, Providence, and New York City public schools, and in the Adult Correctional Institution in Rhode Island.

After graduating from University of Pennsylvania, Miller went on to receive her MFA in playwriting from Brown University, where she studied with Paula Vogel, Charles Mee, Aishah Rahman, and Mac Wellman. Miller was an original company member of Annex Theater in Seattle.

Miller is currently the Chair of the English Department, serving since 2022.

### **EDUCATION:**

MFA, Creative Writing, Brown University BA, English, University of Pennsylvania

Read Suzanne Maynard Miller's CV

### ACADEMIC INTERESTS:

Creative Writing Modernism American Theater

### Viviana Acquaviva | Simons Foundation | Awarded \$18,594

Climate Change Research Support: From Galaxy Evolution to Climate Models: A data driven journey

### Soyeon Cho, Na Yin (Baruch) | New York Research Data Center | Awarded \$94,706

Collaborative: Enhancing Equity in SSA Services: Addressing the Barriers Faced by Asian American Older Adults in Chinese, Korean and Indian American Communities

Urmi Duttagupta | Northeastern University | Awarded \$10,000 DHS STEM Peer Grant

Sitaji Gurung | CUNY- Research in the Classroom | Awarded \$10,000 Integrating Real world research into HSCI 4201: Enhancing Student Learning Through Applied Medical Metrics

German Kolmakov | National Science Foundation | Awarded \$49,588 Prototyping Quantum Powered AI building platform - Supplemental Award

### German Kolmakov | Department of Defense/U.S. Army | Awarded \$39,572

High School & Undergraduate internships summer program - Supplement

German Kolmakov | CUNY- Research in the Classroom | Awarded \$10,000 Advancing Photonics Education in a Classroom: Integrating Metasurface Research from ASRC into undergraduate physics curriculum at City Tech

David Sanchez-Jimenez, Diana Samaroo, Melanie Villatoro National Endowment for the Humanities | Awarded \$150,000 Enriching the Humanities Curriculum to Embrace Cultural Relevance

### Eusiuk Sung | Hofstra University/National Science Foundation | Awarded \$109,304

Collaborative: Computer Science Through Engineering Design in New York (CSed-NY)

### Viviana Vladutescu, Li Geng, Lufeng Leng, Giovanni Ossola | Department of Energy | Awarded \$700,000

Science and Engineering Student Apprenticeship Program in Accelerator R&D

### Ching-Song Wei (BMCC), Xiaohai Li | National Science Foundation | Awarded \$49,461

Equitable Pathways to Artificial Intelligence

### Ozlem Yasar, Akm Rahman | National Aeronautics and Space Administration (NASA) | Awarded \$ 49,911

Utlizing PEGDA for Sustainable Seed Growth: Microgreens in Space

### Viviana Acquaviva | Simons Foundation | Awarded \$279,540 From Galaxy Evolution to Climate Models

### Marzi Azarderakhsh, Hamidreza Norouzi | Ausable Freshwater Center | Awarded \$100,000

Survey of Climate Change in Adirondak Lake Ecosystems (SCALE) Pilot

### Ansil Baptiste | U.S. Department of Education | FY 2025 Amount \$490,597 | Awarded \$1,962,388

Early Start and Extended Hours: Campus Child Care for Students

### Sidi Berri, Gaffar Gailani | National Science Foundation | Awarded \$28,177

Collaborative Research: Research Infrastructure: CCRI: New: Data-Driven Cybersecurity Research Infrastructure for Smart Manufacturing

### Christopher Blair | National Science Foundation | Awarded \$440,973

RUI: Partial Lizard Genomes and New Analytical Tools Provide a Novel Conceptual Framework for Understanding Biogeographic Patterns Throughout the Deserts of Western North America

Reginald Blake, Hamidreza Norouzi | National Aeronautics and Space Administration (NASA) | FY 2025 Amount \$25,000 | Awarded \$50,000 Assessment of Urban Heat Island Risks, Impacts, and Resiliency Solutions

### Reginald Blake, Hamidreza Norouzi | National Science Foundation | Awarded \$705,500

REU Site: Research Experiences for Undergraduates in Satellite and Ground-Based Remote Sensing at NOAA-CESSRST-Enhanced Engagement

### Reginald Blake, Hamidreza Norouzi, Vicki Ferrini | Columbia University/ National Science Foundation | FY 2025 Amount \$212,280 | Awarded \$1,061,858

Implementing Novel Solutions for Promoting Cultural Change in GeoScience Research and Education (INSPIRE)

### Reginald Blake, Hamidreza Norouzi, Masato Nakamura, Marzi Azarderakhsh | National Science Foundation | Awarded \$491,069

Recruiting and Retaining Nongeoscience Minority STEM Majors for Geoscience Service Learning and for the Geoscience Workforce II

### Reginald Blake, Hamidreza Norouzi, Diana Samaroo | Robin Hood Foundation | FY 2025 Amount \$500,000 | Awarded \$1,990,000

City Tech Learning Recovery Program

### Pamela Brown, Alana Kim | NYS Education Department | FY 2025 Amount \$425,503 | Awarded \$2,118,230

Collegiate Science and Technology Entry Program(CSTEP)

### Pamela Brown, Erica Morales | NYS Education Department | FY 2025 Amount \$139,242

Smart Scholars Early College High School Partnership

### Pamela Brown, Alana Kim | NYS Education Department | FY 2025 Amount \$488,910 | Awarded \$2,334,640

Science and Technology Entry Program(STEP)

### Pamela Brown, Patty Gorkhover | NYS Education Department | Awarded \$1,339,710

Perkins V- Career & Technical Education Act

### Pamela Brown, So Lan Liang | NYC Department of Education | Awarded \$25,000

Smart Scholars Early College Programs

### Emerson Ea | Rutgers University | Awarded \$18,525

Collaborative: Resource Center for Alzheimer's & Dementia Research in Asian and Pacific Americans

### Emerson Ea | Rutgers University | Awarded \$17,480

Collaborative: Rutgers- NYU Center for Asian Health Promotion and Equity

### Urmi Duttagupta, Viviana Acquaviva, Diana Samaroo, Nadia Kennedy National Science Foundation | Awarded \$999,625

Engaging, Empowering, and Retaining New Scholars in Science, Technology, Engineering and Mathematics

### Gaffar Gailani, Denise Sutton, Angran Xiao, Sidi Berri, Akm Rahman | National Science Foundation | Awarded \$569,635

An Inclusive Model for a Bridge to Industry and Entrepreneurship in Advanced Materials and Manufacturing

### Nadia Kennedy, Euisuk Sung | NYS Education Department | FY 2025 Amount \$241,502 | Awarded \$1,297,373

My Brother's Keeper Teach Opportunity Corp

### German Kolmakov | National Science Foundation | Awarded \$250,000 PFI-TT: Prototyping a Quantum-powered AI Building Platform

### German Kolmakov, Lufeng Leng | Department of Defense | Awarded \$799,931

Fundamental Research to Build Polariton-assisted Optical Quantum Networks

### Boyan Kostadinov | Oak Ridge Institute for Science and Education | Awarded \$50,000

Using Data Science Tools for Investigating Communications from the Conti Group and the Oath Keepers

### Lili Ma | National Science Foundation | Awarded \$79,995

Collaborative Research: CISE-MSI: DP: CNS: An Edge-Based Approach to Robust Multi-Robot Systems in Dynamic Environments

### Benito Mendoza, Marcelo Sztainberg | Northeastern Illinois University/National Science Foundation | Awarded \$192,744

CISE-MSI: RPEP:S&CC:Information Systems meet CUltural COmpetencies (IS-CUCO): Enabling data-driven decision-making in underserved Hispanic populations

### Hamidreza Norouzi, Akm Rahman | Department of Energy | Awarded \$88,445

Sustainable DoE Partnership to Advance Fundamental research in Earth and Environmental System Sciences at an Underrepresented Institution

### Hamidreza Norouzi, Ivan Guzman | NYU/U.S. Department of Transportation | FY 2025 Amount \$48,000 | Awarded \$96,000

Collaborative: US DOT Connedted Communities for Smart Mobility

### Akm Rahman | National Aeronautics and Space Administration (NASA) | Awarded \$49,150

Geocrete for fully deployable in-situ construction

### Jonas Reitz, Satyanand Singh | U.S. Department of Education | FY 2025 Amount \$249,978 | Awarded \$749,964

Connect the Dots: Digitial Open Tools and Support for Student Success in STEM

### David Sanchez-Jimenez, Noemi Rodriguez | Modern Language Association | Awarded \$10,000

Spanish Medical Interpretation and Healthcare Communication Curriculum Modifications for Future Language-Concordant Professionals

### Fangyang Shen, Andrew Douglas, Hon Jie Teo, Annie Han, Ahmet Mete Kok | National Science Foundation | FY 2025 Amount \$442,298 | Awarded \$1,444,398

Enhanced Noyce Explorer, Scholar, and Teacher Development for High-Need Schools in NYC

### Shelley Smith | U.S. Department of Education | FY 2025 Amount \$600,000 | Awarded \$2,999,983

STEM Success Collaborative: Advancing Equity for Hispanic and Low-Income Students through an Innovative Model of Academic, Student Support, and Institutional Resource Integration

### Melanie Villatoro, Muhammad Ummy, Hamidreza Norouzi, Daeho Kang, Masato Nakamura | National Science Foundation | Awarded \$1,499,481

Developing an Ecosystem of STEM Success for Built Environment Majors

### Charlotte Welker | LSST Corporation | FY 2025 Amount \$140,508 | Awarded 558,239

LSST Catyalyst Fellowship

### Charlotte Welker | National Radio Astronomy Observatory (NRAO)| **Awarded \$39,975**

Student Observing Support (SOS)

### Charlotte Welker | National Science Foundation | Awarded \$223,210 LEAPS-MPS: Where galaxies keep their cool in the heat: A Pathfinder to detectcool cosmic gas filaments and their effects on galaxy properties in clusters

### Huseyin Yuce | Oak Ridge Institute for Science and Education | Awarded \$100,000

Economical Impact of COVID-19 and Optimal Vaccination Distribution at County Level in the U.S.

### Mai Zahran, Armando Solis, Ian Alberts, Katherine Bay | National Science Foundation | Awarded \$998,665

Beginnings: Introducing Molecular Modeling Experiences to Underrepresented Students

Enhanced proposals are still pending and will be announced in May.

### Ralph Alcendor | Biological Sciences | Awarded \$6000.00

Evaluating the Impact of Cinnamon-Rum Extract on Oxidative Stress and Antioxidant Responses in Tetrahymena Thermophila and HEK293 cells

### Nina Bannett | English | Awarded \$5482.00

U.S. Women Writers, Solitary Walking, and Feminism: A Walk of Her Own

### Megan Behrent | English | Awarded \$6000.00

Poetry and Politics: Audre Lorde, Adrienne Rich and the Women's Liberation Movement

### Allison Berkoy | Entertainment Technology | Awarded \$3500.00

Human-machine Performances (Continued)

### Soyeon Cho | Human Services | Awarded \$6000.00

Bridging Cultural and Systemic Gaps: Understanding Caregiving Burden and Resource Needs Among Korean

### Wanett Clyde | Library | Awarded \$3249.00

Brooklyn Style

### Kimberly Colclough | SEEK | Awarded \$2350.00

Overcoming Imposter Syndrome and Microaggressions: The Role of Mentorship in Advancing Black Women in Higher Education Leadership Roles

### Ines Corujo Martin | Humanties | Awarded \$3500.00

Fashioning the Hispanic World: Women's Objects, Identity, and Material Culture, 1820-1898

### Todd Craig | African American Studies | Awarded \$6000.00

"Turn That TV Off!": A Digital Multimodal SoundScape

### Lia Dikigoropoulou | Architectural Technology | Awarded \$3500.00

Modernity and Adaptive Reuse in South African Architecture

### Vitaliy Dorogan | Physics | Awarded \$3500.00

Photoluminescence of Hybrid Quantum-Dot / Transition-Metal Dichalcogenide Nanostructures

### Javiela Evangelista | African American Studies | Awarded \$3498.45

Proximities of Being: Statelessness in the Dominican Republic

### Andrea Ferroglia | Physics | Awarded \$3500.00

NNLO QCD Corrections to the semileptonic B-meson decay

### Samaneh Gholitabar | Construction Management & Engineering Technology | Awarded \$3499.70

A Comprehensive GIS-Driven Assessment of Bridge Vulnerability to Climate Change Induced Scour in New York State

### Sitaji Gurung | Human Services | Awarded \$3500.00

Assessing Post-COVID Nicotine and Tobacco Use and Exploring At-Home Nicotine Replacement Therapy

### Carrie Hall | English | Awarded \$4482.00

Murderapolis: A Memoir

### Ahmed Hassebo | Electrical & Telecommunications Engineering Technology | Awarded \$5939.00

Optimizing Smart City Infrastructure: Evaluating 5G for Smart LED Streetlight Connectivity

### Kevin Hom | Architectural Technology | Awarded \$5993.00

Retail Metropolis: The Evolution of Retail Architecture and Urban Land Use in London and New York (1750–1950)

### Kel Karpinski | Library | Awarded \$3500.00

Mapping desire in Times Square: queer films from the 1970s and 80s

### Nadia Kennedy | Mathematics | Awarded \$3500.00

The Dialogical Construction of Student Teacher Identity

### Roman Kezerashvili | Physics | Awarded \$6000.00

Possible existence of  ${}^{\circ}_{\Phi}$ Be and  ${}^{\circ}_{\Phi\Phi}$ He  $\Phi$ -mesic and  ${}^{\circ}_{\Omega}$ Be and  ${}^{\circ}_{\Omega\Omega}$ He Ω-baryon nuclei.

### Pegah Khosravi | Biological Sciences | Awarded \$3499.69

Enhancing Prostate Cancer Diagnosis with a Multimodal CNN-Based Al Model

### Paul King | Architectural Technology | Awarded \$6000.00

Roebling Aqueducts Film Project

### German Kolmakov | Physics | Awarded \$3500.00

Interaction of radio-frequency radiation with excitons in transition-metal dichalcogenides

### Xiaohai Li | Computer Engineering Technology | Awarded \$3500.00

Augmented Aerial Swarm and Sensor Network for Wildfire Early Detection

### Xiangdong Li | Computer Systems Technology | Awarded \$6000.00

A Study of Quantum Inference Engine

### Nan Li | Mathematics | Awarded \$5781.00

Bounding Curvature Integral on Singular Spaces

### Emilio Minichiello-Epstein | Mathematics | Awarded \$5976.00

Hypersheaves and Differential Geometry

### Jonas Reitz | Mathematics | Awarded \$2990.00

Unforcing

### Jennifer Sears-Pigliucci | English | Awarded \$4536.00

The Last Third of the Night

### Christopher Swift | Humanities | Awarded \$3500.00

Machines and Shadows: Islamic Technology & the Performing Arts of the Medieval Mediterranean

### Ryoya Terao | Entertainment Technology | Awarded \$3499.00

Beyond 13 Driver's Licenses (working title)

### Sara Woolley | Communication Design | Awarded \$6000.00

Drawing Migration

### **BEST POSTER PRESENTATION AWARDEES**

**Ahmed Hassebo** with Mohamed Tealab From a Traditional City to a Smart City: The Measurement of Cities'

Readiness for Transition, Egypt as a Case Study.

**Vitaliy Dorogan** with Keven Cruz, Mikheil Vardoshvili, Pedro Sotomayor, Stefanie Rivera and Tomas Gonzalez

Fabrication and Characterization of Monolayered Transition-Metal Dichalcogenides.

**Subhendra Sarkar** with Evans Lespinasse, Eric Lobel, Somdat Kissoon and Daler Djuraev

Manipulating Harmful Compton Radiation in Composite Filters to Generate Variable X-ray Flux for Imaging Soft Biomaterials: Let Devil Do Some Good.

### **ONE-MINUTE FACULTY POSTER PRESENTATIONS**

### Dan H. Chen, Abbi Raper and Laura Andreescu

Impact of Dental Genetic Therapies in Dentistry.

### Margaret Rafferty, Paola Guzman, Elizabeth Santos, Dmytro Stapinskyy and Shuhua Kuang

Wildfires: A Threat to Public Health.

### Vishwas Joshi

Iodineprotein Nanoparticles for Cancer Imaging and Therapy

### **Anita Giraldo**

Democracy Spoken Here – Progress of a Typographic Art Print Series.

### Ahmed Hassebo, Mohamed Tealab

From a Traditional City to a Smart City: The Measurement of Cities' Readiness for Transition, Egypt as a Case Study.

### Aaron F. Jones, Pavel Karpov, Henry Mejia F., Mir F. Mithila and Aparicio Carranza

Navigating the Digital Sky

### Samaneh Gholitabar and Alexis Torres

Climate Change Impacts on Bridge Scour Risk in New York State

### Mary Tedeschi, Sergio Belich, P. Ricaurte Quijano, C. Danoff, J. Corneli and Sridevi Ayloo

Peeragogy and Teaching

Daler Djuraev, Adriana Galvan, Peter Spellane and Anna Feitzinger Microbial Diversity of Newtown Creek

### Patricia Medina, Justin Mejia and Bledar Ndoni

Comprehensive Crime Analysis: Integrating Classification, Regression and Spatial-Temporal Insights

### **Vasiliy Znamenskiy**

Properties of Water in Extreme Space Environments: A Computer Study

### Vitaliy Dorogan, Keven Cruz, Mikheil Vardoshvili, Pedro Sotomayor, **Stefanie Rivera and Tomas Gonzalez**

Fabrication and Characterization of Monolayered Transition-Metal Dichalcogenides.

### Subhendra Sarkar, Evans Lespinasse, Eric Lobel, Somdat Kissoon and Daler Djuraev

Manipulating Harmful Compton Radiation in Composite Filters to Generate Variable X-ray Flux for Imaging Soft Biomaterials: Let Devil Do Some Good.

### **FALL 2024 POSTER WINNERS**

Luis Luna mentored by Prof. Zayed Saleh, Valve Train Design and Testing, **Honors Scholars** 

Monisha Sooklall mentored by Prof. Tamrah Cunningham, Amazed: Teaching architectural design styles with a board game, Honors Scholars

Sabahat Moughal mentored by Prof. Sarah Price, Cultural Barriers and Communication: South Asian Experiences in Health Care Settings, ESP

Thomas Alarcon Ali, Zohaib Khan, Ariel Marroquin, Samuel Martinez, Fabiha Samiha, and Emily Yong mentored by Prof. Ozlem Yasar, Utilizing PEGDA for Sustainable Seed Growth: Microgreens in Space, ESP and Honors Scholars

Anjum Ahmmed, Nick Antoine, Christopher Gabriel Lopez, Jennifer Garcia, and Marti Tapia mentored by Prof. Alexander Aptekar, Optimizing Indoor Environment Quality, ESP

### **SPRING 2024 POSTER WINNERS**

**Daniel Colon** mentored by **Prof. Jeremy Seto**, Hydrogeological Properties of Green Roof Media and Granular Soils, ESP

Muhammad Hassan Butt and Alexis Torres mentored by Prof. Samaneh Gholitabar, Climate Change Impacts on Bridge Scour Risk in New York State, C2SMARTER and ESP

Majida Naz mentored by Prof. Annie Ngana Mundeke, Profit Before Patients: A Comprehensive Study on the Influence of Profit-Driven Motives in the U.S. Healthcare System, ESP

Kaung Myat Thu mentored by Prof. Raja Ahmed, Securing Kubernetes Services Exposed to Public Networks from Cyber Attacks, ESP

Nick Antoine, Fareda Elsherif, Brailyn Ventura, Mohamed Hassan, and Michael Ray Malonjao mentored by Prof. Alexander Aptekar, Straw Bale Net Zero: Sustainable Building Solutions, ESP

Kevin Valencia, Cheriyah Wilmot, Kaylynn Daoud, and Sofia Bilbao mentored by **Prof. Naomi Langer-Voss,** ARCscholars Spring 2024: Architectural Solutions To A Better Quality Of Life For The NYCHA Queensbridge Houses Community, ESP

Manuel Andrago, Rushelle Diata, Carlos Lopez III, Brandon Oliva-Catucci, and Benny Mak mentored by Prof. Abdou Bah, Effects of Flooding on Transportation Infrastructure, PSYS 1002ID

Najwad Kased mentored by Prof. Alias Aljalis, Stealth Velocity, Honors Scholars Student Panel Award

### INTRODUCTIONS

Drawn from the news and accomplishments that you shared during the past year with Communications and Faculty Commons. Please also keep your scholarship reporting up to date in CUNYfirst; these reports are compiled as Annual Reports to CUNY and posted to Faculty Commons under Scholarship > Faculty Scholarship & Creative Work.

Maureen Archer-Festa (School of Professional Studies), Beth Levine (City Tech Foundation), and Ryan Rowe (Radiologic Tech & Medical Imaging) submitted a successful proposal to the Mother Cabrini Foundation for \$174,630 to purchase an anatomage table and a portable radiographic unit for the Department of Radiologic Tech & Medical Imaging.

Phillip Anzalone (Architectural Technology) has been asked to serve as City Tech's Director of the Research Yard at the Brooklyn Navy Yard, a joint initiative with Pratt and the Brooklyn Navy Yard for an advanced research and applied learning facility that connects faculty and students with the Yard's ecosystem of more than 500 businesses.

Marzieh Azarderakhsh (Construction Management & Civil Engineering Technology) participated in a multi-institutional/agency collaborative project, Monitoring Harmful Algal Blooms in the Delaware River Watershed Using Drones and Spatial Analysis, funded by the National Fish and Wildlife Foundation – Delaware Watershed Conservation Fund. The project will develop algorithms to predict the development of benthic and planktonic HABs to inform decision-making for habitat management and restoration initiatives.

Illya Azaroff (Architectural Technology) collaborated with the team at AIA New York State on the 2024 AIANYS Disaster Assistance Resource Guide to equip architects with the tools, resources, and knowledge they need to support disaster response and recovery. Professor Azaroff was in the news this year: as leader in regenerative design and resilient planning strategies, commenting on Governor Hochul's \$8 Million of Awards To Advance Zero-Carbon Multifamily Buildings; profiled in June as "a visionary architect dedicated to disaster mitigation, adaptation, and regenerative design" in the online newsletter, Disrupt; and featured on CBS Morning News in a segment that explored how technology is helping to improve the speed and cost of building homes. Watch the interview. Professor Azaroff was elected President of the American Institute of Architects' (AIA) Board of Directors, as 2025 Presidentelect/2026 President.

Nina Bannett (English) published two books of poetry this year, Persephone's Alibi: Poems (David Robert Books, 2024) and Motion Photos: Poems (Finishing Line Press, 2024). Professor Bannett also published the article "Embedded Narratives: Female Critics, Autotheory, and Solitary Walking in the Twenty-First Century" in the October/November 2024 issue of Women's Studies: An Interdisciplinary Journal; and presented "Solitary Walking as Protest in Jamie Quatro and Rahawa Haile" at the New Perspectives On Walking Women in Anglophone Literatures and Cultures Conference in Hamburg, Germany in March 2025. Read about Professor Bannett's work here.

Esteban Beita (Architectural Technology) was honored with a Design Award of Merit from the Society of American Registered Architects (SARA) in June for his design of a Japanese Tea House Pavilion. Professor Beita's firm, Wabi Design, specializes in the implementation of traditional Japanese design principles in contemporary architecture and his research focuses on the application of these design principles for the improvement of urban spaces. Read more here.

Monica Berger (Library)'s monograph, Predatory Publishing and Global Scholarly Communications was published in May 2024 (Association of College and Research Libraries). She was interviewed for the New Books Network podcast and was invited to speak at Villanova University and at the Florida Health Sciences Librarians annual meeting. She, with library department colleagues Junior Tidal and Anne Leonard, presented at the Association of Creative Technologies in Academic Libraries Conference last July. Lastly, her PSC-CUNY grant-funded project, Rock Monographs Bibliography, was launched and is a resource for scholars and educators of popular music.

**Allison Berkoy** (Entertainment Technology) participated in two exhibitions with YOU ARE PREPARED: a pop-up training center for self-optimization – this spring at New Media Project Space at University of North Carolina Asheville, Asheville, NC. Curated by Victoria Bradbury. April 4-18, 2025; and at last fall at Harvestworks at Governors Island, New York, NY. Curated by Carol Parkinson. October 5-27, 2024. Professor Berkoy also gave two invited talks, "Body Control: Interactive Installations and Performances," Department of New Media at University of North Carolina Asheville, Asheville, North Carolina, Artist Talk, April 4, 2025; and "In Control: Performances Between Humans and Al," invited presentation and panel discussion for Al and Technology in the Arts at CUNY Graduate Center, hosted by CUNY Academy for the Humanities and Sciences, moderated by Nazanin Hedayat Munroe, New York, NY, November 21, 2024.

**Reginald Blake** (Associate Provost and Dean of Curriculum and Research) has been honored by the Council of the American Meteorological Society with a vote to receive The Charles E. Anderson Award. The citation reads: "For being a selfless champion of BIPoC students, an inspiring mentor, and a treasured colleague who enriches DEIJ efforts in the atmospheric sciences." The formal presentation of the award will occur in conjunction with the 105th AMS Annual Meeting to be held 12-16 January 2025 in New Orleans, Louisiana.

Christopher Blair (Biological Sciences) was co-author of a study that used molecular data to determine the evolutionary affinity of a new population of lizard in western Mexico. Genetic and morphological data indicate that this represents a new species. The first author is a City Tech graduate! Read the abstract here.

**Soyeon Cho** (Human Services) submitted a proposal to the NY Retirement & Disability Research Center in May for the project: Enhancing Equity in SSA Services: Addressing the Barriers Faced by Asian American Older Adults in Chinese, Korean, and Indian Communities, which was accepted for funding by the Social Security Administration! The research grant is for a total of \$100,000.

### **Todd Craig** (African American Studies and CUNY Grad Center) is the recipient of the David H. Russell Award for Distinguished Research in the Teaching of English from the National Council of Teachers of English (NCTE). The NCTE awards recognize literacy educators and experts for their commitment to work that advances literacy, the field of education, and the NCTE. Professor Craig was highlighted as a scholar who explores racial literacies, culture, and identity through the perspective of the Hip Hop DJ in his research and in his book, "K for the Way": DJ Rhetoric and Literacy for 21st Century Writing Studies (Utah State University Press). Read more about Professor Craia here.

Andrew Frederick Douglas (Mathematics) co-authored two articles with his collaborator Joe Repka, "Narrow and wide regular subalgebras of semisimple Lie algebras" in Journal of Algebra (2025); and "Cyclic wide subalgebras of semisimple Lie algebras," in Communications in Algebra (2024).

Gaffar Gailani (Mechanical Engineering Technology) was featured in the latest issue of CUNY Research in Focus for his role as project director for the Center of Medical Devices and Additive Manufacturing at City Tech. Here, students gain hands-on experience with advanced 3D printers and Computer Numerical Control (CNC) machines as they work to design and create prosthetic devices that are affordable and accessible for the global market, including options constructed from locally sourced material. Read more here.

Camille Goodison (English) wrote, "Now and Then" (The Dewdrop, Spring 2024) as a tribute to her dear Aunt Terry, who died a year ago. "Letting In All the Ancestors" (Tricycle: The Buddhist Review, August 2024) and "Circle Home" (WSQ: Women's Studies Quarterly, April 2025) likewise celebrated her memory. Professor Goodison's work also appeared in The AutoEthnographer this year.

George Guida (English) has published his tenth book, The Uniform, a novel that explores inherited bigotry, fear and racism. It appeared on March 1st, 2024, from Guernica Editions and has already received rave reviews from both Kirkus Reviews and The Brooklyn Rail.

Sitaji Gurung (Health Sciences) was awarded one of CUNY's highly competitive Research in the Classroom (RIC) grants. The \$10,000 in funding will support the integration of real-world research experience using medical metrics into HSCI 4201.

Ivan Guzman (Associate Professor, Construction Management and Civil Engineering Technology) recently traveled to Puerto Rico as a U.S. Department of Agriculture science fellow, part of a program that strengthens educational partnerships with faculty and staff from Hispanic-Serving Institutions. He spent a week gaining insights into agricultural practices, green roofing and research at the International Institute of Tropical Forestry. Read more here.

**Ahmed Hassebo** (Electrical and Telecommunications Engineering Technology) and his students, Kevin Balbuena Montes, and Erick Cabrera, won Best Paper Award for "Arduino-ESP32 based Smart Irrigation System" at the American Society for Engineering Education Northeast Section Conference on March 22nd.

Russell K. Hotzler (City Tech President) was included on the 2024 amNY Metro & PoliticsNY Power Players in Education list, which honors dedicated leaders who champion progress and success in all forms of education, from presidents of educational institutions to directors of nonprofits to policymakers. The 2024 Power Players in Education seeks to identify leaders at the forefront of shaping New York's education landscape and guiding students towards a bright future.

**Jen Hoyer** (Library) co-edited a book with Lani Hanna, Josh MacPhee, Vero Ordaz, and Sarah Seidman, Armed by Design: Posters and Publications of Cuba's Organization of Solidarity of the Peoples of Africa, Asia, and Latin America (OSPAAAL). Brooklyn, NY: Common Notions, 2025. Read about the book here. Professor Hoyer also published two book chapters, "The News Is History: Building News Literacy Skills with Historic Primary Sources" in News Literacy Across the Undergraduate Curriculum (Bloomsbury Libraries Unlimited, 2024) and, with Julia Pelaez, "It's so Liberating to Do the Work: Education in Archives Creates Space for People with Disabilities" in Preserving Disability: Disability and the Archival Profession, Gracen Brilmyer and Tang Lydia, eds., Series on Archives, Archivists, and Society 10. Sacramento, CA: Litwin Books, 2024. Read the chapters on Academic Works.

Paul King (Architectural Technology) has been appointed Director of the Brooklyn Waterfront Research Center following Richard Hanley's retirement from the position this past spring.

**Pegah Khosravi** (Biological Sciences) published peer-reviewed articles in Cancer Research, Biology Methods & Protocols, Journal of Imaging, and JMRI on AI for cancer diagnostics and radiology; delivered invited talks and chaired sessions at the 2025 Society of Robotic Surgery and ISCN; was awarded a USPTO patent (US12014833B2) for an Al-based embryo selection system; was a finalist for the 2025 Women in Al Researcher of the Year, and secured both the CUNY Innovation & Entrepreneurship Prototyping Fund and a PSC-CUNY Research Award Program for translational AI in medical research. Read about Professor Khosravi in City Tech News.

**David Lee** (Humanities) published two book chapters about COVID vaccination in Pandemic Resilience, a volume edited by David Berube (Springer Nature, 2024). Read about the book here. Professor Lee also organized a panel and presented a paper about vaccine communication at the National Communication Association Conference In New Orleans (2024).

Patricia Medina (Mathematics) was invited to give a lecture on the field of machine learning in Kolkata, India, at the 2025 International Conference on Data Management, Analytics & Innovation (ICDMAI-2025), the largest data science conference in Southeast Asia. Read more about it here.

**Elizabeth Milonas** (Computer Systems Technology) presented two conference papers this year with collaborators Duo Li (Shenyang Institute of Technology) and Qiping Zhang (Long Island University). "Preparing Undergraduate Data Scientists for Success in the Workplace: Aligning Competencies with Job Requirements" at the 2024 ASEE Annual Conference & Exposition: The Future of Engineering Education in Portland, Oregon found that most undergraduate data science programs effectively prepare students to meet minimum job requirements. "Converging Paths in Divergent Systems: A Comparative Analysis of Data Science Education Strategies in China and the United States" at the 2024 FIEE/IEEE Frontiers in Education Conference in Washington DC found differing emphases on technical vs. management skills in Data Science and Business Analytics programs in China and the U.S.

**Emilio Minichiello** (Mathematics) posted two new preprints on the arXiv this semester: "Coverages and Grothendieck Toposes" (https://arxiv.org/ abs/2503.20664), a long set of notes explaining the basics of categorical sheaf theory, and "Structured Decomposition Categories" (https://arxiv.org/ abs/2207.06091), in which Professor Minichiello and collaborators use category theory to generalize the notion of treewidth to more general settings and see how to relate different such notions of width measures. Read about Professor Minichiello's work here.

Marissa Moran (Law & Paralegal) was appointed by the New York State Bar Association to a task force to explore Artificial Intelligence and the law. She is one of the main drafters and contributors of the recently published report including sections on Legal Profession Impact and the Evolution of AI and Generative AI. (Read more about the Task Force and report.)

Nazanin Hedayat Munroe (Business - Fashion) won the R.L. Shep Book Award for Sufi Lovers, Safavid Silks and Early Modern Identity (AUP, 2023), selected as the best book in the field of ethnic textile studies by Textile Society of America. The committee members noted that the book brings the highest standard of research and scholarship to a topic of significance to the field of global textile studies. Read about the award here.

Eli Neugeboren (Communication Design) has completed his first fulllength graphic novel Whatever Happened to Frankie King. The book is a collaboration with his father Jay Neugeboren, the author of twenty-three books. Frankie King was a precocious student and a promising basketball player at Brooklyn's James Madison High School in the early 1950s, and the novel recounts the story of a unique and sometimes troubled life as well as a meditation on dreams realized, lost, and abandoned. Read more about the book here.

**Unurjargal Nyambuu** (Social Science – Economics) has co-authored a book on the low-carbon economy, <u>Sustainable Macroeconomics</u>, <u>Climate Risks and Energy</u> Transitions: Dynamic Modeling, Empirics, and Policies (Springer). Co-authored by Willi Semler, the book explores the myriad challenges of climate change and of reaching a low-carbon economy. The authors survey relevant historical models, conduct empirical and numerical analyses of climate change models, provide empirical illustrations, and evaluate diverse policy options and implementations together with their historical evolution. Read more about the book.

Robert Ostrom (English) published a fourth poetry collection, The Bear Wrestler (Saturnalia, 2025). The work explores memory, myth, and grief through the figure of the bear. Poems from the book appeared in Bennington Review and The Ocean State Review, and an interview about the collection was featured in The Rumpus.

Vivian Zuluaga Papp (English) presented a paper entitled "'His Microscope, his Horoscope, his Telescope, and all his Scopes': Farcical Vision and Anti-Evidence in Aphra Behn's The Emperor of the Moon" at the Aphra Behn (Europe) Society's 8th International Conference at the University of Kent in Canterbury, England July 2024. Read the conference program here.

Robert Polchinski (Environmental Control Technology) was interviewed for an August article in the Guardian "From A to C: how to get the most out of your window air conditioner."

**Akm Rahman** and **Ozlem Yasar** (Mechanical Engineering Technology) were awarded a grant from NASA's Minority University Research and Education Project (MUREP) Partnership Learning Annual Notification (MPLAN) for a research project, "Polyethylene Glycol Diacrylate for Seed Growth: Microgreens in Space," to address the challenges of microgreen cultivation using a minimum amount of water in space, thereby providing vital nutrition to astronauts. Read more here.

Juan L. Rivera-Correa (Biological Sciences) published "Autoantibodies against phosphatidylserine and DNA during canine Dirofilaria immitis infection," a senior/ corresponding author peer-review research article in Veterinary Parasitology, part of his international collaboration with scientists from Costa Rica. He also published a first-author peer-reviewed research article titled "ROCK1 promotes B cell differentiation and proteostasis under stress through the heme-regulated proteins, BACH2 and HRI" in the Journal of Clinical Investigation (JCI) Insight (PMID: 39903532), and presented an original research poster presentation for the 2025 New England Association of Parasitologists (NEAP 2025) titled "Autoimmunity during Tropical Parasitic Diseases: Human Malaria and Canine Heartworm Disease." In December, Professor Rivera-Correa participated in the New York CHIPS and Latino Workforce Roundtable with congressional, industry, and community leaders to discuss how to capacitate our CUNY students to meet those workforce needs.

Annette J. Saddik (Theatre and Literature) was interviewed on "Theater: All the Moving Parts," hosted by Patrick Pacheco. Watch the interview.

Diana Samaroo (Chemistry), David Sanchez-Jimenez (Humanities), and Melanie Villatoro (Construction Management and Civil Engineering Technology) recently received a three-year award of \$150,000 from the National Endowment for the Humanities (NEH) for a project on "Enriching the Humanities Curriculum to Embrace Cultural Relevance." Read more here.

Jennifer Sears (English) won the John Simmons Short Fiction Award from the University of Iowa Press for her short story collection, What Mennonite Girls are Good For. In March 2025 at the Northeast Modern Language Association Convention, she presented on panel titled "Nabokov and Philosophy" and chaired two sections of a creative writing panel, "Defiant Narrativity: Risk, Resonance, and (R)evolution."

**Sarah Ann Standing** (Humanities) has issued two new books in her book series, Studies in Theatre, Ecology, and Performance (STEP) for Routledge Press, for AY 2023-2024: Angenette Spalink, Choreographing Dirt: Movement, Performance, and Ecology in the Anthropocene (2023) and Sondra Fraleigh and Shannon Rose Riley (eds.) Geographies of Us: Ecosomatic Essays and Practice Pages (2024). Four additional books are in contract with the series at this time.

**Denise Sutton** (Business) sat down with Professional and Technical Writing student Sugeiry Fernandez for an engaging conversation on her podcast, Teepee Chronicles. Together, they explored the evolution of fashion—from past trends to today's style influences. Listen to the interview here.

Christopher Swift (Humanities) has won this year's Bevington Prize from the Medieval and Renaissance Drama Society (MRDS) for his book, Ritual, Spectacle, and Theatre in Late Medieval Seville: Performing Empire. The committee of judges wrote, "Swift's impressive monograph brings Iberian theater out of the blind-spot of the field of early drama studies and teaches us something new about medieval theatrical traditions that have gone overlooked and understudied while also making important and exciting contributions to current theories of performance and performativity. The committee found Swift's book innovative, engaging, and beautifully expressed."

Laura Westenguard (English/LGBTQ Studies) is pleased to announce that City Tech has been awarded \$35,000 for AY 24-25 to support LGBTQIA+ programming and initiatives – the third year in a row that we have received funding! Professor Westengard was featured on The Project Podcast at the Graduate Center to discuss the years-long effort to establish the Grad Center's new Advanced Certificate in LGBTQ Studies, how it provides students with a formal credential in LGBTQ studies, and its role in bridging academic research with real-world impact. Read more about it <u>here.</u>

Sara Gómez Woolley (Communication Design) was interviewed for the PW podcast, More to Come, where she discussed 'Comics As a Second Language', an anthology of student work that came out of a course she developed and taught last fall at the CUNY Graduate Center, The Art of Visual Memory: Exploring and Creating Biography and Memoir in the Graphic Novel Format.

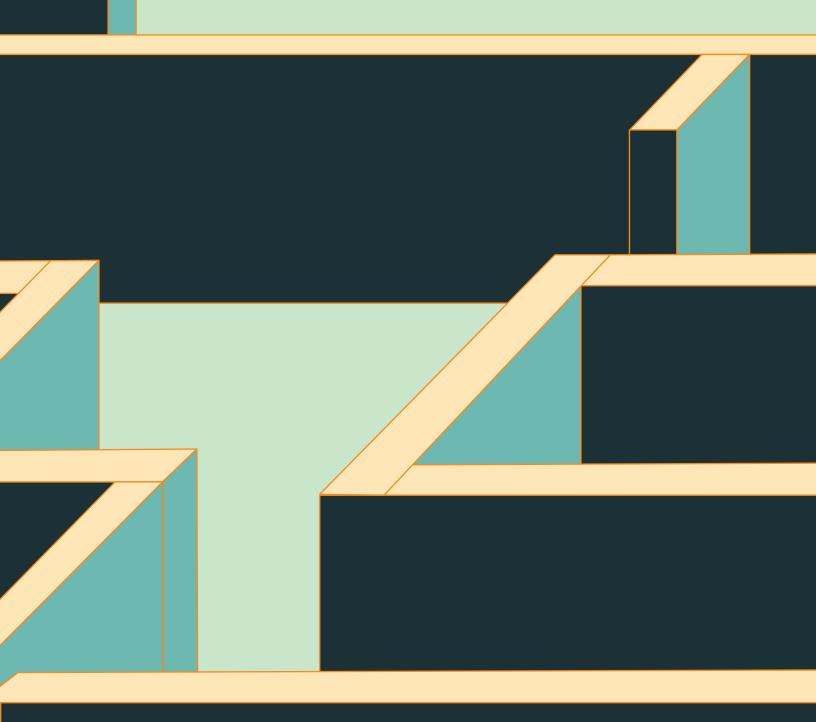
**Zoya Vinokur** (Radiologic Technology & Medical Imaging) was interviewed by City Tech alum and podcaster Lazar Lazarovski about arriving in the U.S. as an immigrant with just \$90 in her pocket and going on to lead one of the most competitive and innovative radiography programs in New York State. <u>Listen here.</u>

**Anne Zissu** (Business) and co-author C. A. Stone published four papers this year: "Structured Estate Planning: A Model for Reducing Taxable Value Through Optimized Withdrawals Under Current U.S. Tax Laws: Optimizing Withdrawals to Minimize Estate Taxes." Journal of Wealth Management, Fall 2025, Vol. 28; "Withdrawal Timing and Income Tax Rate: An Indifference Curve for Inherited IRAs." Journal of Retirement, Winter 2025; "Distribution Strategies for Non-Eligible Beneficiaries of IRAs under the 2019 Secure Act. Journal of Retirement (2025); "Valuation of Pools of Senior Life Settlements During The Covid-19 Pandemic and the Death Multiplier Factor." Journal of Alternative Investments, Fall 2024.









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