



**Farmingdale
State College**
State University of New York

Friday, March 29th, 2024
2nd Annual Symposium

FARMINGDALE STATE COLLEGE
IGNITE
SYMPOSIUM

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Symposium
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PROGRAM AGENDA

Check-In and Light Refreshment

9:30am—Campus Center Lounge

Welcome Address & Keynote Address

Dr. John S. Nader, *President of Farmingdale State College*

Dr. Peter Park, *Assistant Professor in the Biology Department*

10:00am—Campus Ballroom A

Poster Session I

10:30am—Campus Ballroom B

SpakrSpeaker Session I

11:30am—Campus Ballroom A

Lunch (provided by Aramark)

12:00pm—Campus Ballroom A and Campus Center Lounge

Poster Session II

1:00pm—Campus Ballroom B

SparkSpeaker Session II

2:00pm—Campus Ballroom A

Closing Remarks

Dr. Christopher Malone, *Associate Provost*

2:30pm—Campus Ballroom A

CURATION COMMITTEE

DR. DYLAN GAFARIAN, Director

Research Aligned Mentorship Program

RITA GROSS, Counselor

Research Aligned Mentorship Program

SUEANN LUNDQUIST, Assistant Director

CSTEP— Academic Support and Access Programs

MEGAN MARCHASES, Reference and Instruction Librarian

Greenley Library

ALLIE MCGLONE, Counselor

Research Aligned Mentorship Program

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DOUGLAS LOPALO

TEVIN FOSTER

PROVOST'S OFFICE

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MIKE PUGLISSI

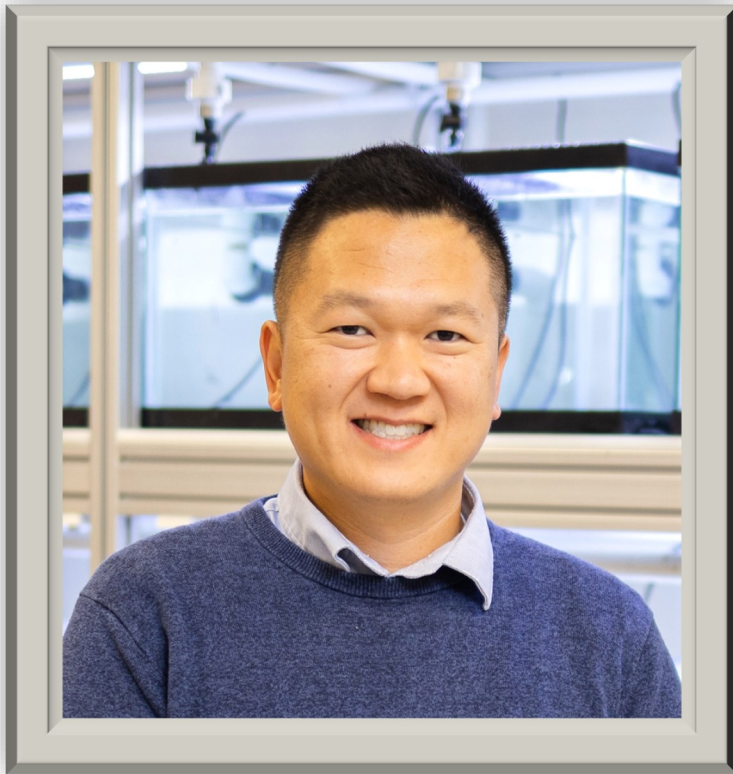
JOSEPH SINCHI-DOMINGUEZ

FACULTY EVALUATORS

This event is not possible without the efforts of our volunteer Faculty Evaluators—faculty members and research mentors. The success of the IGNITE Symposium is due in large part to the many evaluators providing feedback to the student presenters throughout the Symposium. In addition to student feedback, the scores are used to award three presenters, \$100 Visa Gift Cards! (Faculty Evaluator Rubric)

DR. MARYBETH APRECINO, <i>Applied Psychology</i>	DR. SHOHANA IFFAT, <i>Civil Engineering</i>
PROF. DAVID BROCKER, <i>Applied Psychology</i>	DR. CHRISTOPHER LABARBERA, <i>Provost's Office</i>
DR. TRACY CALLENDER, <i>Bioscience</i>	DR. WENHAI LI, <i>Mechanical Engineering Tech</i>
DR. NUR DEAN, <i>Computer Systems</i>	PROF. KATHY MACHINN, <i>Library</i>
DR. DEANNA DEVLIN, <i>Criminal Justice</i>	DR. CHRIS MALONE, <i>Provost's Office</i>
PROF. APRIL EARL, <i>Library</i>	PROF. JESSICA MCGIVNEY, <i>Library</i>
DR. TARIK ELTAEIB, <i>Computer Security</i>	PROF. ALLIE MCGLONE, <i>RAM Program</i>
DR. JING BETTY FANG, <i>Business Management</i>	PROF. FATOMA RAD, <i>Library</i>
DR. MICHAEL FRAINA, <i>Sports Management</i>	DR. JILL SILVERMAN, <i>Nutrition Science</i>
DR. DYLAN GAFARIAN, <i>RAM Program</i>	SARINA TURBENDIAN, <i>RAM Program</i>
PROF. KAREN GELLES, <i>Library</i>	DR. GOZDE USTUNER, <i>Automotive Tech</i>
DR. RAMON GONZALEZ, <i>Aviation</i>	PROF. RENA VARGHESE, <i>Nexus Center</i>
DR. JOHN GROSS, <i>History, Politics & Geography</i>	DR. XIAOJIN YE, <i>Computer Systems</i>
PROF. RITA GROSS, <i>RAM Program</i>	PROF. TERRY ZAHOR, <i>Library</i>
DR. JAMIE HARTLESS, <i>Sociology</i>	DR. BAHAR ZOGHI, <i>Civil Engineering</i>

KEYNOTE ADDRESS



Dr. Peter Park

is an Assistant Professor in the Department of Biology. His expertise is in evolutionary ichthyology, fish community science, and scientific teaching. His research interests include fish brain and behavior and science communication. Dr. Park was awarded the Farmingdale State College Faculty Center 2024 Innovative Pedagogy Award and the CTLT 2022 Outstanding Mentorship Award. He teaches BIO131 and the brand new BIO310 Ichthyology lecture-lab course, which he initiated

together with the Biology Department at Farmingdale State College. Dr. Park is a Howard Hughes Medical Institute (HHMI) BioInteractive Ambassador and co-developed the widely accessible Stickleback Evolution Virtual Lab (<https://www.biointeractive.org/classroom-resources/stickleback-evolution-virtual-lab>). He is also the recipient of the 2020 American Fisheries Society (AFS) Northeastern Division Special Achievement Award for his work on fish community science partnerships along the East River. Dr. Park also serves on the Hudson River Estuary Management Advisory Committee (HREMAC) and the advisory board for the national Sea Grant Community Engaged Internship (CEI) initiative.

POSTER SESSION I

Poster	Title	Presenters
1	Renovation of Historical NYC Stair & Soffit Design with Modern Codes & Technology	Katherine Bonilla, Gabriela Carpio, Nicholas Cardone, Susan Ehrler, Tahj-Michael Gibbons, Anthony Simpson, Hayden Taylor
2	Winter Mini-Semester 2024	Susan Ehrler
3	FSC Bus and Welcome Station	Di Lu, Ruth Escano, Matthew Warner
4	Protecting the Endangered Shortnose Sturgeon (<i>Acipenser brevirostrum</i>) Fish From Extinction: Monitoring Current Breeding Sits of the Shortnose Sturgeon and Identification of Key Ecological Parameters	Duron Jones
5	Identifying Southern Pine Beetle Damage In High Spatial Resolution Drone Imagery Using Multiscale Image Segmentation and Random Forest Classification	Saija Villanova, Alice Jenks
6	Degree of STEM Cell Efficacy in Treating Spinal Cord Injuries	Aaliyan Ahmad
7	The Art of Investigation: Fishing for Perfection	Elijah E. Galloway
8	Researching Stress and Fatigue Among Campus Police Officers	Tyler Kaufmann
9	Identity and Attitudes Towards the Police	Arianna Rivera, Damari Machado, Isaiah Ojo, Keira Kelly, Natalie Jordan
10	The Breakthrough for Unseen Students	Milan Gayle
11	Fluoxetine (Prozac) Effects on Serotonin Levels within <i>Drosophila Melanogaster</i> Brains	Kenia Sanchez
12	Modeling a Design-Build Project from Concept to Proposal	Katherine J Bonilla, Gabriela Marisol Carpio, Susan Ehrler, Tahj-Michael Gibbons
13	Using a plant-derived auxin inducible degron for depletion of Pol32 during budding yeast meiosis	Karim Niang, Alma Quijano
14	What was I Thinking? An Exploration of the Ick Phenomena	Oliva Butler
15	Self-Affirmation in the Works	Cole Stancek
16	Beyond the Controller	Farqaleet Akram, Joseph Devita, Teddy Saenz Gamarra
17	Escaping Modern Review Sessions	Aliyah Khan, Daniela Figueroa, Katie Hernandez, Katherine Gomez, Priya Persad
18	Stress vs. Academic Performance in Secondary Students	Aliea Ramlal
19	Analyzation and Optimization of the LArASIC P5B Chip Data	Oscar Bonilla
20	Developing Active Modules for Testing Application-Specific Analog and Digital Circuits	Marco Iorio

POSTER SESSION I

Poster	Title	Participants
21	Team Building and Work Production	Jalen Stram
22	Creating a Cybersecurity Solution to Deal with Zero-Day Attacks	William Ackerman
23	Mechanistic Study of pre-Mrna Alternative Splicing in PDAC	John Apollo
24	Estee Lauder	Kayli Villalta, Christian Intriago, Kenneth Miller
25	The Effectiveness of Mock Trails South Oaks Hospital	Joseph O'Rourke, Noelia Jijon, Justina Di Maggio, Ashley, Clark, Nicole Vallinoto, Michael Quinones
26	beyondbinary Providing Inclusive Care for Everyone	CJ Ehrlich
27	Unconventional Offices: Investigating the public Spaces of Fringe Festival Buskers	Alvaro Villatoro and Anna Edwards
28	X (Twitter) Bot Detection Utilizing Machine Learning	Kathleen Tan, Amanda Harnos
29	Cyber Security Measures	Bilal Siddiqui
30	Transplantation using Embryonic Stem Cells	Jashandeep Kaur
31	The Effectiveness of Stress-Reducing Strategies on Registered Nurses	Ricky Hsiao
32	TikTok Share Predication Through Machine Learning (Logistic Regression)	Kevin Contay, Justin Derenthal
33	High Ionic Conductivity Materials Li_3LaBr_6 For Solid-State Batteries	Dylan McCoy
34	Study Abroad Experience in Egypt	Sabrina Achille
35	The Optimal Schedule in Expanding a Franchise Business	Selin Akcay, Paul D'Amour, Javeria Khalid
36	Recent Studies on Different Networks Using the Prisoner's Dilemma Game	Edward Walch, Christopher Matejek

SPARKSPEAKERS SESSION I



Jairo Orozco, an exceptional talent from Farmingdale. As a rising Senior in the RAM Program, Jairo is majoring in Applied Psychology with a focus on Industrial-Organizational Psychology, and pursuing Micro-credential in Undergraduate Research and Experiential Mentorship. A dynamic student leader, Jairo's influence extends from the Student Affairs and Services Committee (SASC), as the current Treasurer of the Student Government Association (SGA), and he's set to ascend as next year's SGA President, showcasing his unparalleled leadership skills. Last summer, Jairo ventured into the realm of psychological neuroscience, spending eight transformative weeks at the University of California, Irvine's esteemed Summer Institute in Neuroscience. Under the mentorship of Dr. Michael Yassa at the Yassa Lab, he delved into the intricate ways emotions influence memories, exploring the nuanced differences across sexes and genders, particularly in individuals experiencing depression. This summer, Jairo is excited to elevate his research skills at the prestigious Icahn School of Medicine at Mt. Sinai, where he'll further his exploration into the mysteries of neuroscience.

Imoleayo Abdul is a 4th-year Bioscience major at Farmingdale State College, set to embark on her journey toward a Master of Science in Nursing (MSN) starting next fall. Throughout her time at Farmingdale, Abdul has been a recipient of prestigious scholarships, including the Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) and the Estée Lauder Scholarship, awarded to commendable students upon their admission to Farmingdale. In addition to her academic achievements, Imoleayo has benefited from the invaluable guidance of Farmingdale's esteemed faculty through the Research Aligned Mentorship (RAM) Program and the Collegiate Science Technology Engineering Program. Born and raised in Nigeria, Imoleayo experienced two contrasting lifestyles. Initially, she faced a reality where poverty, illness, and hunger were commonplace. However, upon relocating to the United States, she discovered the abnormality of not knowing where one's next meal would come from due to the lack of sustainability in her home country. In honor of her late mother, who consistently exercised immense acts of kindness, Imoleayo established the Seyi Abdul Foundation in August 2022. Since its inception, SAF has made a profound impact on countless lives, embodying Imoleayo's unwavering commitment to serving her community and aiding those in need.



Rahim Akhter Senior, Bachelor of Science in Computer Programming and Infor-

mation System & **Abdul Khan** Sophomore, Bachelor of Science in Computer Science. Abdul Khan has always had a passion for learning how to operate in new fields, while Rahim Akhter has always strived to succeed at any challenge. During SURI 2023, Under Mentorship of Doctor XiaoJin Ye & Doctor Nur Dean, They took up the task to conduct research in Music Popularity Classification via Musical Features utilizing Machine Learning. Continuing during Fall 2023, they had begun expanding their datasets to 100,000 entries via the Spotify API, and utilizing tools such as Over Sampling & Binning to improve the quality of their experimental process. Through this experience they have learned how to conduct critical research, line by line process review, academic critique, and professional standards in journal creation. At this year's IGNITE Symposium they hope to present their findings and share their passion for this field with Peers and Faculty at Farmingdale State College.



POSTER SESSION II

Poster	Title	Participants
1	Las Vegas Meets Long Island: Casino Development Project	Tahj-Michael Gibbons, Arham Jamil, Francesco Cirigliano, Surag Unnikrishnan
2	Empowering Sustainable Transportation with Innovative Infrastructure: Design-Build Proposal Submitted by Skyline Design & Build– Farmingdale State College	Gabriela Carpio, Katherine Bonilla, Susan Ehrler, Mohammed Kazmi
3	How YouTube Impacts Literacy	Marvin Godinez Juarez
4	Thinking of Healing	Jecenya Tapia-Cabrera
5	How Toxic are Harmful Algal Blooms (HABs) on Larval and Juvenile Freshwater (<i>Fundulus heteroclitus</i>)?	Alice Jenks and Khubaib Haque
6	Monitoring Cyanobacteria Concentrations In Understudied Lakes: An Eastern Long Island Case Study	Saija Villanova, Kenneth Grant, Viktoria Basiou
7	Whole Brain and Brain Lobe Evolution of Threespine Stickleback Fish (<i>Gasterosteus aculeatus</i>) in Recently Transplanted Lake Populations of Cook Inlet, Alaska	Kinza Yasmeen
8	Mental Health in Relation to Sports	Lauren Varagnolo
9	Gardens and Student Impact	Ahmed Khokhar, Kayla Menendez, Luz Granados, Mishal Syed, Samantha Salazar
10	Caffeine Consumption in Farmingdale State College Students	Hasnayn Raza
11	Internship Experience at L'Oréal HQ USA	Emily Rustrian-Henriquez
12	Examining Wild-Type Neuroserpin in the Presence of Mutant Neuroserpin Aggregates	Karim Niang
13	Increased Allocation of Funds to Provide Low Income Communities with Adequate In-School Resources	Kim Brijbasi
14	Identification of Chibby-Interacting Proteins in Human Ciliated Cells	Jason A. Benitez
15	How Music Can Affect the Emotions of High School Students	Aubrey Morra
16	Multipath Wireless Experiment	Bryan Joya, Mazen Kapadi, Jeovani Quintanilla
17	Music Popularity Classification utilizing Machine Learning	Rahim Akhter and Abdul Khan
18	For strength to be maintained, how many days of training are required?	Jozka Guaman
19	Wireless Data Transmission for Cryogenic Detectors	Oscar Bonilla
20	Race, Ethnicity, and Jury Decision Making	Dai'Zhanae Debose

POSTER SESSION II

Poster	Title	Participants
21	Recycled Plastic Reinforced Concrete	Alfredo Canales
22	How the Growth of Artificial Intelligence Affects the Mental Health of the Unemployed Workforce	William Ackerman
23	An Exploratory Study into the Convergence of Narcotics Trafficking and Agriculture	Evan Barnes
24	Perceptions of Creepiness	Terri Payne, Joseph Devita
25	Imagining the Older Self	Joseph McQuade, Samantha Sysak
26	Age Moderates the Relationship Between IQ and Facial Emotion Recognition at Low But Not High Levels of Autism Spectrum Disorder Feature Levels	Julia Wygand
27	Age Moderates the Relationship Between IQ and Facial Emotion Recognition at Low Feature Levels of Autism Spectrum Disorder	Hardeep Singh
28	Reducing the Return of Injury After Completing Physical Therapy	Anthony Solimo
29	Patient Cocaine Use: Everything the Dental Professional Should Know	Stanislav Kavchuk
30	Celiac Disease: Impact on the Body and Oral Health	Andrea Garcia, Paola Salinas-Lemus
31	Acid Erosion and its Effects on Teeth	Amber Hussain, Marina Babaisakova, Rushpreet Kaur
32	Workplace Violence in Healthcare	Hanna McLaughlin, Lesly Covenas, Mikayla Neubert, Nicole Aresta, Patrica Cholakis
33	Put Down The Vape!- The Impact of Vaping on the Oral Cavity	Jill Kosky, Katerine Andrea Navas, Sarah Lanning
34	Hydroxyapatite vs. Fluoride	Allie Stanya
35	Assessing the Advantages of Robotic-Assisted vs Traditional Surgery	Elizabeth Cintron
36	Prevalence of periodontal disease in controlled vs uncontrolled diabetes	Derrick Pouncy
37	The Comparison of the Amount of Dangerous Misinformation within Search Engines and Social Media	Jason Yi
38	The World of Programming Languages	Derek Tol

SPARKSPEAKERS SESSION II

Kinza Yasmeen is a junior pursuing a bachelor's degree in Bioscience. She was lucky to be selected to partake in the Research Alignment Mentorship (RAM) program as well as being an S-STEM Scholar. She has had the opportunity to be in faculty-guided research through RAM and with Dr. Park. She also had the opportunity to be one of the first set of interns to participate in an internship with Estee Lauder at Bioscience Park last spring. Kinza is exploring her major to help her grow as an individual and to have no regrets about her undergraduate years. She hopes to become an excellent Doctor. She believes that each new experience will help her broaden her knowledge and allow her to gain transferable techniques and skills that she can apply in the future.



Jennifer Perugi is an undergraduate student at Farmingdale State College, pursuing a Bachelors of Science in Industrial Technology - Facility Management as well as a certificate program in Wind Turbine Technology. She is a recipient of the WRISE (Women of Renewable Industries & Sustainable Energy) Rudd Mayer Wind Power Fellowship, awarded with the 2023 cohort. Through the fellowship the cohort had the opportunity to attend the American Clean Power (ACP) CleanPower Conference. At the conference WRISE hosted a Diversity, Equity and Inclusion session which fostered conversation around its importance within the workforce. Jennifer was proud to represent, along with her cohort, women within the wind energy industry. Participating in the fellowship, Jennifer was provided mentorship and able to build connections amongst women working within all aspects of renewable energy industries. As a Latina in STEM, Jennifer is passionate about representing diversity and was grateful to be able to connect and learn from so many outstanding leaders within the industry. Jennifer is a highly energetic and motivated student who shows initiative through her volunteer work. Most recently she has had the opportunity to volunteer at the 2023 Offshore Wind Power Conference with ACP, the 2023 National Offshore Wind Research & Development Consortium Symposium, and WindAid Institute in January 2024. Jennifer strongly believes that we must act as good stewards towards our planet, and that integrating renewable energy into our grid system is a crucial part of creating a sustainable future. After graduation she wants to apply what she has learned back into her community, and is determined to make a meaningful impact in the renewable energy sector. Jennifer is thrilled for the ongoing development of offshore wind projects, especially those based out of her home state of New York. As the wind energy industry continues to grow, Jennifer sees its great potential to be a vital part of decarbonizing our grid, bolstering energy security and resilience, all while taking advantage of domestic energy sources. Jennifer enjoys rock climbing, creating art, reading, and spending time by the ocean.



Oscar Bonilla, a trailblazing talent from Farmingdale, recently graduated as an affiliate from the prestigious RAM program, earning a degree in Electrical Engineering Technology. A true champion for diversity and inclusion, Oscar founded the Society of Hispanic Professional Engineers, providing a platform to uplift and empower Hispanic students pursuing careers in STEM fields. Driven by an unwavering passion for innovation, this visionary leader is currently pursuing a Ph.D. in Electrical Engineering, further expanding his expertise and influence within this dynamic industry.



