



Stony Brook
University

2018 Summer Research Symposium

Friday, August 3

Charles B. Wang Center

Schedule

Poster Session: 9:00 -10:30 AM

Closing Ceremony: 10:45 - 11:30 AM

BioPREP: Biology Partnership in Research and Education Program

Kelly Joya Correal

Sebastian Villacres

*Suffolk County Community College &
Stony Brook University*

Limitations of *Uca Pugilator*

Dr. Jeffrey Levinton

Ecology & Evolution

Allisyn Lopez

Queensborough Community College

Using Microbiometer® to Detect the Short-
and Long-term Effects of Roundup Ready
To Use III® on Soil Microbes and Fungus

Dr. Sharon Pochron

*School of Marine &
Atmospheric Sciences*

C-STEP: Collegiate Science & Technology Entry Program

Brandon Banarsi

Malcolm Carter

Lawrence Gaines

Fabrizio Quintanilla

Stony Brook University

External Algae Air Conditioner: Reducing
Thermal Energy Through CO₂ Absorption

Francesca Polo (*instructor*);

Vaughn Greene, Paul Jorge,

Nylette Lopez (*TAs*);

C-STEP

Arlene Alvarez

Ifeoluwa Rasaki

Kevin McMahon

Stony Brook University

PET Plastic Degradation Using a Multi-
Layer *Ideonella Sakaiensis* Approach

Francesca Polo (*instructor*);

Vaughn Greene, Paul Jorge,

Nylette Lopez (*TAs*);

C-STEP

Brandon Bello

Carlos Carranza

Samantha Sanchez

Veronica Uhuegbue

Stony Brook University

Real-Time Diagnostic Infant Monitoring
Apparatus

Francesca Polo (*instructor*);

Vaughn Greene, Paul Jorge,

Nylette Lopez (*TAs*);

C-STEP

Tiffany Anchundia

Richard Brea

Onyinye Njoku

Nathanael Payen

Stony Brook University

Multimodal Cholesterol Mitigation via
Nanorobotics

Francesca Polo (*instructor*);

Vaughn Greene, Paul Jorge,

Nylette Lopez (*TAs*);

C-STEP

Samuel A. Escobar

Melissa R. King

Jason Lopez

Jessica M. Morales

Stony Brook University

Maintaining Calcium Homeostasis via Real
Time Monitoring

Francesca Polo (*instructor*);

Vaughn Greene, Paul Jorge,

Nylette Lopez (*TAs*);

C-STEP

EXPLORATIONS in STEM:
Biology-Exploration† & PSEG Scholars*

Daniel Aldarondo†
Stony Brook University

Enzymology of the Adiponectin Receptors:
Therapeutic Targets for Diabetes

Dr. Michael Airola
Biochemistry & Cell Biology

Amelia Camino*
Stony Brook University

IceCube Artificial Light Source (Flasher)
Data Reconstruction

Dr. Joanna Kiryluk
Physics & Astronomy

Gongwei (David) Chen*
Stony Brook University

A Unique Phone App for Reducing Obesity
and Beyond

Dr. Mei Lin Chan
Biomedical Engineering

Emily Costa*
Stony Brook University

Catalytic Production of Renewable
Transportation Fuels

Dr. Devinder Mahajan
*Materials Science &
Chemical Engineering*

Jackelyne Garcia Cruz†
Stony Brook University

Using CRISPR/Cas9 for Genetic Analysis of
cdh6 Regulation in Neuro-Mesodermal
Progenitor (NMP) Differentiation in
Zebrafish Development

Dr. Benjamin Martin
Biochemistry & Cell Biology

Karthik Ledalla*
Lukas Velikov*
Stony Brook University

Genetic Sugar Factories: Engineering
Cyanobacteria to Secrete Sucrose

Dr. J. Peter Gergen
Biochemistry & Cell Biology

Ivan Lin*
Stony Brook University

Generative Adversarial Networks in Semi-
Supervised Machine Learning

Dr. Martin Radfar
Computer Science

Avery Mack*
Stony Brook University

Optimization of Electric Vehicle Charging
Stations: Facility Locations and Scheduling

Dr. Leila Hajibabai-Dizaji
Civil Engineering

Mario Mendoza*
Stony Brook University

Utilizing Android Smartwatch as a Controller
Featuring Super Mario Bros.

Dr. Aruna Balasubramanian
Computer Science

Erika Nemeth†
Stony Brook University

Mesenchymal Stem Cell-Based Delivery of
Gene-Silencing Products

Dr. Peter Brink
Physiology & Biophysics

Jared Ocasio*
Stony Brook University

Augmented Reality Video Games for Making
Upper Limb Stroke Rehabilitation Engaging

Dr. Mei Lin Chan
Biomedical Engineering

Marisa Petrusky*
Stony Brook University

Aligning GEM Detectors: A Journey Through
Euclidean Space

Dr. Abhay Deshpande
Dr. Nils Feege
Physics & Astronomy

Mariya Zelinska*
Stony Brook University

Engineering Advanced Textile Materials with
Selective Wetting Dynamics

Dr. Carlos Colosqui
Mechanical Engineering

IMSD-MERGE: Initiative for Maximizing Student Development: Maximizing Excellence in Research for Graduate Education

Kevin Catalan
Stony Brook University

Investigating the Mechanism of Enhancer Interference in the *Drosophila* Embryo

Dr. J. Peter Gergen
Biochemistry & Cell Biology

Acacia Morris
Stony Brook University

A Simple Change in Bacterial Transformation Protocol to Increase Toxic Protein Yield

Dr. Ed Luk
Biochemistry & Cell Biology

Jessica Vilas-Boas
Stony Brook University

Binding Kinetics of Novel Kinase Inhibitors Distinguish Leukemia Drug Behavior

Dr. Markus Seeliger
Pharmacological Sciences

INDUCER: Increasing Diversity in Undergraduate Cancer biology Education and Research

Doreen Dadson
Stony Brook University

The Role of the Protein Scribble in Cell Migration

Dr. Maya Shelley
Neurobiology & Behavior

Emmaly Gutierrez
Stony Brook University

Optimizing Multiplex Fluorescent labeled Antibody Based Detection of Mouse Mammary Tissue for Macrophage Markers

Dr. Patricia Thompson-Carino
Pathology

Maame Gyamfi
Maryam Tayyab
Stony Brook University

The Interplay of Monocytes in the Tumor Microenvironment of Glioblastomas

Dr. Styliani-Anna E. Tsirka
Pharmacological Sciences

Tiana Reyes
Stony Brook University

Implementation of DNA, RNA, and Protein Isolation from Patient Lung Carcinoma Tumors

Dr. Jennie Williams
Family, Population & Preventive Medicine

NEW YORK NASA SPACE GRANT

Christian Cummings
Stony Brook University

Reduced-Order Modeling of Scramjet Engine for Hypersonic Air Vehicles

Dr. Foluso Ladeinde
Mechanical Engineering

Andrea Londono
Stony Brook University

Free-Space Automatic Alignment System for Quantum Communication

Dr. Eden Figueroa
Physics & Astronomy

Jose Menjivar
Stony Brook University

The Effects of Carbon Nanotubes on Carbon Fiber Composites

Dr. Kedar Kirane
Mechanical Engineering

William Wallace
Stony Brook University

Tip-Enhanced Raman Spectroscopy and Applications

Dr. Daniel Knopf
School of Marine & Atmospheric Sciences

Research Experiences for Undergraduates (REU): Nanotechnology for Health, Energy & the Environment

Kristal Estrella
*Barnard College of
Columbia University*

A Statistical Analysis of NSF Funding on
Nanotechnology Grants Through the
Experimental Program to Stimulate
Competitive Research (EPSCoR)

Dr. Thomas Woodson
Technology & Society

Elina Hoffman
Johns Hopkins University

An Analysis of the National Science
Foundation's Broader Impacts Criterion:
Inclusivity within Nanotechnology Grants

Dr. Thomas Woodson
Technology & Society

Ming Hu
Stony Brook University

CoO_x/CeO₂ Catalysts for Greenhouse
Gas Elimination

Dr. Tae Jin Kim
*Materials Science &
Chemical Engineering*

Kevin Kucharczyk
Farmingdale State College

Viscoelastic Ink Design for 3D Printing
Batteries

Dr. Karen Chen-Wiegart
*Materials Science &
Chemical Engineering*

Karen Li
The City College of New York

Fe₃O₄ Nanoparticles as an Alternative
Electrode Material for Lithium-Ion Batteries

Dr. Amy Marschilok
Dr. Esther Takeuchi
Dr. Kenneth Takeuchi
*Materials Science & Chemical
Engineering, Chemistry*

Chloe Leigh Ong
Adelphi University

Endothelial Cell qC1qR Expression Under
Shear Stress

Dr. Wei Yin
Biomedical Engineering

Steven Snell
*Suffolk County
Community College*

Corrosion and Micro/Nanostructural
Properties of 3D Printed Stainless Steel

Dr. Gary Halada
*Materials Science &
Chemical Engineering*

Nicole Trometer
University of Florida

Understanding the Mechanisms of Strain
Delocalization in Metallic Glass Matrix
Composites

Dr. Jason Trelewicz
*Materials Science &
Chemical Engineering*

Research Experiences for Undergraduates (REU): Scalable Data Analytics for Big Data

Hannah Yao
Stony Brook University

Detecting Suicide Risk Among Opioid
Users on Reddit Using Deep Learning

Dr. Fusheng Wang
*Biomedical Informatics,
Computer Science*

Thank you to our program staff and contributors:

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Dr. Daniel Moloney
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C-STEP

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EXPLORATIONS IN STEM

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Yousef El-Laham
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Brian Frank
Karen Kernan
Dr. Marianna Savoca
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Toni Sperzel

REU Scalable Data Analytics for Big Data

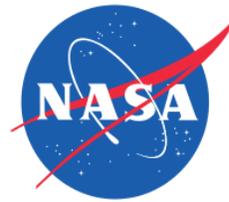
Dr. Fusheng Wang

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CIE / Center for Inclusive Education

Institute for STEM Education

 STONY BROOK UNIVERSITY



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PSEG

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Undergraduate Biology



Undergraduate Research & Creative Activities



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University**