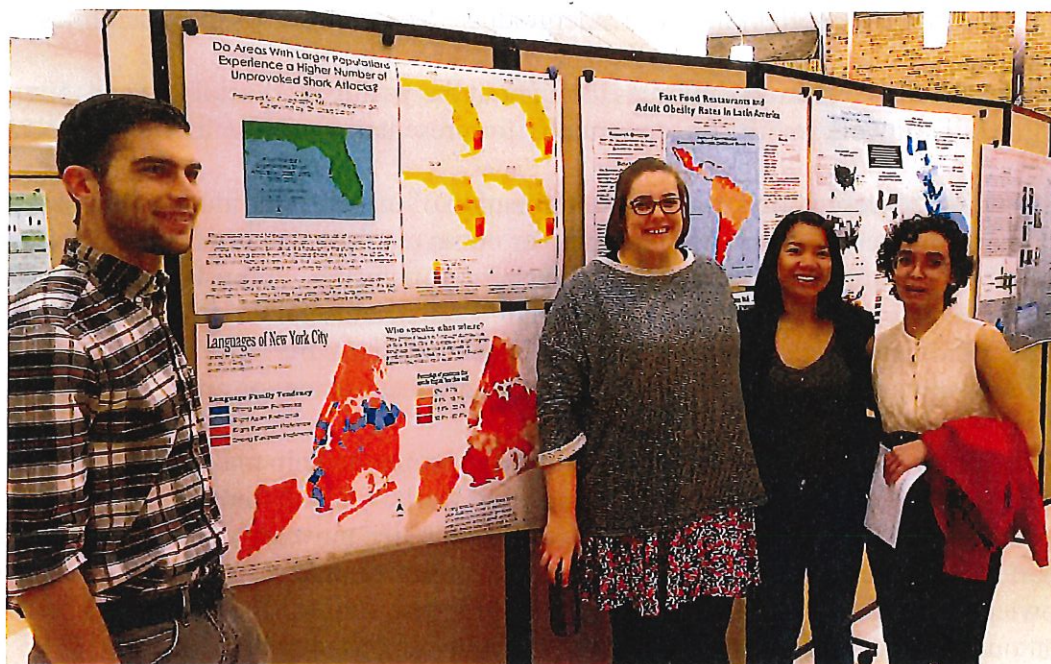




HOFSTRA
UNIVERSITY®



2017
UNDERGRADUATE
RESEARCH DAY

THURSDAY MAY 11, 2017
STUDENT CENTER
PLAZA ROOMS

Poster Session 11:00AM-1:00PM

**The Spring 2017
Undergraduate Research Day
May 11, 2017**

Welcome to a celebration of Undergraduate Research across the disciplines!

Advanced student research continues throughout the year in all disciplines and, after months of hard work, merits the opportunity for presentation, recognition and applause!

Each student's presentation marks the culmination of intense individual or team research, in books or in the lab, in the field or studio or on stage, often with moments of anguish, uncertainty, frustration, but also happy discovery, satisfaction, enthusiasm, relief and -- revision, revision, revision. There's a reason it's called a discipline! The culmination of an advanced undergraduate's work in that discipline reflects the mastery of both methods and foundational knowledge, and a transition to graduate school or professional life.

As Vice Provost of Undergraduate Research, I am happy to help make visible to the university community in general the outstanding work by highly motivated student researchers in their respective departments all around the university under the guidance of experienced and engaged faculty members. The presentation of research, the sharing of knowledge, is the life-blood of the academic enterprise, and we all benefit from knowing what our hardest working, most advanced students have accomplished.

We all can join in applauding the work of both the students, who work hard over many months after years of course work in their field, and their faculty mentors, who advise and supervise over months and years, with best wishes for continued success!

Please enjoy the poster session from 11:00AM-1:00PM (with lunch provided) in the Student Center Plaza Rooms.

The students look forward to your questions and comments and attention!

Sincerely,

Neil H. Donahue

Neil H. Donahue,
Vice Provost for Undergraduate Academic Affairs
Professor of German and Comparative Literature

Poster Session

11:00 AM – 1:00 PM

DEPARTMENT OF BIOLOGY

Srilu Garikapati

Adaptation of *Clostridium Clariflavum* to Growth in Increasing Ethanol Concentrations Leads to Higher Ethanol Yields and Modified Fermentation Product Profiles

(Javier Izquierdo)

Scarlett Alvarez

Mark and Recapture Analysis of Mammal Density and Its Impact on Tick Prevalence and the Spread of Lyme Disease

(Russell Burke)

Ashna Joseph

Microbial Conversion of Unpretreated and Pretreated Shrub Willow by Mixed Consortia and Pure Cultures of *Clostridium clariflavum* and *Clostridium thermocellum*

(Javier Izquierdo)

Justin Chen

Characterization of Anaerobic Thermophilic Consortia from Gut Microbiomes with the Ability to Convert Cellulose into Biofuels and Byproducts

(Javier Izquierdo)

Shari Zaslow

Community Structure and Variation in Root-Associated Microbiomes of the Beachgrass *Ammophila breviligulata* as Indicators of Plant Health

(Javier Izquierdo)

Brandon Hsieh

Savannah Potter

Characterization and Genome Sequencing of *Sphingobium* sp. BW4, a plant-growth promoter isolated from the beachgrass rhizosphere

(Javier Izquierdo)

Jonathan Bass

Development of Hybrid MTC+Growth Medium for Improved Growth and Biofuel Production by Cellulolytic Thermophilic Bacteria

(Javier Izquierdo)

Catherine Tawfik

The Neural Patterns of Arginine Vasotocin in Single Female Convict Cichlids

(Nicholas Santangelo)

Chelsie Jacques

Effects of Humid Acid on the Olfactory Cues of the Convict Cichlid

(Nicholas Santangelo)

Alyssa Wahlstrom

Vanishing Trees on Long Island: Tree Canopy, Land Cover and Land Use Changes from 2001 – 2015
(*Steve Raciti*)

Reid Wasserman

Harvesting of Periosteal Stem Cells from Rat Femur and Tibia
(*Roche deGuzman*)

Celena Gwin

Production of a Polysaccharide Capsule Increases Antibiotic Resistance of *Acinetobacter baumannii*
(*Nathan Rigel*)

Leah Andren

Comparison of Feeding Kinematics of Two Species of Knifefishes, *Apteronotus albifrons* and *Xenomystus nigri*
(*Christopher Sanford*)

Hannah Gomes

Damage Control: Regulation of Perforin in Decidual CD8+ T cells by microRNAs
(*Jack Strominger & Tamara Tilburgs*)

DEPARTMENT OF CHEMISTRY/BIOCHEMISTRY

Daniel Kim

Computational Investigations of a Hydrogen Generation Reaction by a Cobalt-Based Catalyst
(*Shivnath Mazumder*)

Promi Rahman

Computational Investigations of the Mechanism of Proton Reduction by a Cobalt-Based Catalyst
(*Shivnath Mazumder*)

Jaffar Singh

Computational Investigations of the Water Splitting Reaction by a Copper-Based Catalyst
(*Shivnath Mazumder*)

Mahia Rahman

Laura Xiong

Directed Evolution of the Haloalkane dehalogenase from *Caulobacter crescentus* Towards Smaller, Chlorinated Haloalkanes
(*Emily Mundorff*)

Marisa McNamara

Analysis of Synthetic Cannabinoids with Vibrational Spectroscopy
(*Ling Huang*)

Megan Chambers

NMR Spectroscopy as a Screening Agent for Designer Opioids
(*Ling Huang*)

Keegan Rogers

Analysis of Electronic Cigarette Fluid with DSI GC-MS/MS

(Ling Huang)

Manpreet Kaur

Derivatization of Illicit Drugs for Analysis in Municipal Wastewater

(Kevin Bisceglia)

Arghavan Zolfaghari

Computational Investigations of the Aldol Reaction of Aromatic Aldehydes with the Enolate of Acetophenone

(Shivnath Mazumder and Nanette Wachter)

Haley Tarbox

Synthesis of Nitric Oxide Releasing Pharmaceuticals

(Nanette Wachter)

Anastasia Brodovskaya

Exploring the Role of S289 and L293 in *Enterobacter cloacae* P99 Cephalosporinase by Site-Saturation Mutagenesis

(Scott Lefurgy)

Marissa Strumolo

Evaluation and Improvement of Online Homework for Foundations of Inorganic Chemistry

(Sabrina Sobel)

Gabrielle Cabrera

Synthesis & Characterization of Mixed Short and Medium Chain Fatty Acid Triacylglycerols

(Ronald D'Amelia)

Anthony Sica

Structure-Function Relationships in P99 Cephalosporinase

(Scott Lefurgy)

Jennifer Kim

Using Site Saturation Mutagenesis to Identify Residues that Contribute to Cephamycinase Activity

(Scott Lefurgy)

DEPARTMENT OF ENGINEERING**Nicholas Jones**

Boundary Layer Formation on Axially Aligned Cylinders

(David Rooney and John Vaccaro)

DEPARTMENT OF GEOLOGY, ENVIRONMENT & SUSTAINABILITY

Raymond Baierwalter

A Clammy Situation: Nitrogen Pollution on Long Island
(Sandra Garren)

Ivan Bermejo

¡Aquí Estamos Y No Nos Vamos!: Examining Environmental Racism in San Antonio, Texas
(Sandra Garren)

Matthew Christian

Asset Mapping of Green Spaces on Long Island: A Geographic Information Systems (GIS) – Based Analysis
(Sandra Garren)

Sara Hicks

Let's Get Educated! The Case for Sustainability Education on College Campuses
(Sandra Garren)

Anna Hogan

The Health and Sustainability of Hofstra Food Services
(Sandra Garren)

Sarah Lippman

An Analysis of Environmental Education Programs in Nassau County and Independent Case Studies
(Sandra Garren)

Joseph Murphy

Does Green Campus Web Promoting Lead to More Environmental Education Programs?
(Sandra Garren)

Nabiha Rahaman

The Rags Behind the Riches Project
(Sandra Garren)

Jacob Roday

Farming in the Future: Modeling Controlled Environment Agriculture to Improve Urban Food Desert Sustainability
(Sandra Garren)

Jacob Sacket

Dirty Play: Environmental Education at the Preschool Level
(Sandra Garren)

Andrew Shultz

Food Waste Awareness and Actions at Hofstra University
(Sandra Garren)

Anastasia Yankopolous

Salt Water Sale: Selling Desalination to a Water-Stressed Island
(Sandra Garren)

Adiyar Zharmenov

Feasibility of Anaerobic Digestion of Food Waste at Hofstra University
(*Sandra Garren*)

Scott Lakeram

Coprolites or Pseudo-Coprolites? Preliminary Analysis of Purported Herbivore Coprolites from the Morrison Formation in Utah
(*J. Bret Bennington*)

Thomas Pascucci

Phylogenetic Analysis of a New Crocodylaform (Mesoeucrocodylia: Peirosauridae?) from the Cretaceous of Sub-Saharan Africa
(*J. Bret Bennington & Robert Hill*)

Julia Finneran

Iliana Gogos

Kaitlyn Shire

Assessment of an Interest in a Flood Prevention Application for Residents of the South Shore of Long Island, New York
(*Antonios Marsellos*)

Daniella Chernoff

Scott Lakeram

Thomas Pascucci

Statistical Analysis of Damage to Local Business Due to Flooding Events Along the Mohawk River in Amsterdam, New York
(*Antonios Marsellos*)

DEPARTMENT OF GLOBAL STUDIES AND GEOGRAPHY

Carol Jane Burka

Land of the Free, Home of the Brave-Hateful: Examining Geographic and Demographic Trends in Reported Hates Crimes
(*Craig Dalton*)

Connor Mayes

The Refugee Crisis in Germany
(*Craig Dalton*)

Rachel Scarpino

Comparing Inequality: A Social and Economic Perspective
(*Craig Dalton*)

Robert Levinson

Health Care Expenditure Around the World
(*Craig Dalton*)

Jasmina Dzurlic

Sewer Outflows and Water Quality in Southern Nassau County
(*Craig Dalton*)

James Eager

New Neighbors: The Impact of New Populations on the New York City Subway
(*Craig Dalton*)

Carys Swan

Shipwrecks of WWII
(*Craig Dalton*)

Melissa Reeves

Pranav Bahuleyan Nair

Carol Jane Burka

Rating Cycling and Pedestrian Infrastructure along Sunrise Highway in Nassau County
(*Craig Dalton, Jessica Holzer, & Sylvia Silberger*)

DEPARTMENT OF HEALTH PROFESSIONS

Joseph Kleynowski

Brett Wargo

Identifying Food Deserts Proximate to Hofstra: A Discussion of Methods
(*Jessica Holzer*)

Carol Jane Burka

Pranav Bahuleyan Nair

Melissa Reeves

Rating Cycling and Pedestrian Infrastructure along Sunrise Highway in Nassau County
(*Craig Dalton, Jessica Holzer, & Sylvia Silberger*)

Zachary Yingling

Assessing LBGTQ+ Cultural Competency in Medical, Nurse Practitioner, and Physician Assistant Students at Hofstra University
(*Anthony Santella*)

DEPARTMENT OF JOURNALISM, MEDIA STUDIES & PUBLIC RELATIONS

Zachary Kayal

Robert Pelaez

Social Media and Millennials in the 2016 Election
(*Susan Drucker*)

Chen Qian

Hanlu Xu

WeChat and Ethnic Chinese's Political Attitudes in the 2016 Presidential Election
(*Susan Drucker*)

Ian Callahan

Thomas Weber

The Trump Presidential Campaign and America's New Media Landscape
(*Susan Drucker*)

Elizah Morales

Diversity in the Film Industry
(*Cliff Jernigan*)

DEPARTMENT OF PHYSICS

Richard Myers

Dressing Minimal String Solutions in AdS5
(*Benjamin Burrington*)

Kyle Castoria

Heitler-London Model for Acceptor-Acceptor Interactions in Doped Semiconductors
(*Adam Durst*)

DEPARTMENT OF POLITICAL SCIENCE

Carmen Pestano

Cayuco and Euro Crises: Changing EU Governance of Migration Policy
(*Carolyn Dudek*)

DEPARTMENT OF ROMANCE LANGUAGES & LITERATURE

Gwendolyn Osterwald

The Act of Translation: Young Latina Poets of Our Generation
(*Miguel-Angel Zapata*)

DEPARTMENT OF SOCIOLOGY

Bernard Coles

Blending In and Standing Out: The Social Structure of Adolescent Victimization
(*William Mangino*)

DEPARTMENT OF SPEECH, LANGUAGE & HEARING SCIENCES

Maura Collins

Marcy Mathews

Bilingual Malayalam-English and Monolingual English Speakers' Perception of Word Boundaries
(*Evelyn Altenberg*)

DEPARTMENT OF WRITING STUDIES & COMPOSITION

Kristina Leone

Flexibility in the Center: Accommodation Students with Chronic Illness in the Writing Center
(*Andrea Rosso Eftymiou*)

Rachel David

A Queer Approach to *Archie's* Betty and Veronica
(*Lisa DeTora*)



Notes

Support Undergraduate Research at Hofstra –

Donate to Hofstra's **new Undergraduate Research Fund!**

and

The University will match faculty contributions as a sign of the university's commitment to student research, faculty mentoring, and academic excellence!

The new Undergraduate Research Fund will provide Hofstra University undergraduates with additional resources to travel to research or performance sites, such as libraries, archives, archaeological digs, laboratories, performance venues, or to present research at academic and professional conferences or events, or even to purchase supplies and equipment necessary for their research or performance. The Fund will support students in all disciplines.

Undergraduate research translates theoretical knowledge in any field of study...into action! -- and the production of new knowledge. Help our Hofstra students engage in advanced research and presentation in their field as a step toward later success outside of the university in graduate or professional school, and in their careers. You can see highlights of student research in *Hofstra Horizons of Undergraduate Research*: http://www.hofstra.edu/research/research_undergraduate_horizons.html.

Undergraduate research also supports student recruitment, engagement, learning, retention, advanced achievement and postgraduate success, - as our many successful alumni can attest! A little support goes a long way in helping our most highly motivated students realize their ambitions by pursuing their research and presenting their findings to professional and general audiences.

Your gifts will enable current Hofstra students to perform and present at the highest levels in their disciplines, which, in turn, will help the University attract the best and brightest undergraduates.

Your gift is fully tax deductible and will help ensure that Hofstra graduates have the skills and knowledge to rise to the top of their disciplines. Even a small donation will add up to make a difference to the students we teach and advise in these pursuits, *and the University will match that donation!*

Thanks for your support!

Neil H. Donahue, Vice Provost for Undergraduate Academic Affairs

To make an easy and secure contribution online go to www.hofstra.edu/Gur.

For questions about giving to the Undergraduate Research Fund, please contact:

Dawned M. Alvarado, Office for Development, Hofstra Hall 1018, Hofstra University
Hempstead, NY 11549

E-mail: Dawne.Alvarado@hofstra.edu; Voice: 516-463-5821