

The
23rd
*Semi-Annual
Poster Presentation*

**Honors &
Emerging Scholars**
Poster Presentation

Learning Communities
Theme-Based
Poster Presentation

Wednesday, December 2, 2015
11:00 AM - 4:00 PM
Atrium Ground & First Floors

Thursday, December 3, 2015
10:00 AM - 3:00 PM
Awards Ceremony at 12:30 PM
Atrium Amphitheater

Contents

Honors In A
Regular Course

6

Research Scholars

14

Emerging Scholars

18

Learning Communities

32

Special Projects

36

Awards Ceremony

December 3, 2015
Atrium Amphitheater
12:30 PM

Greetings

Russell K. Hotzler
President

Bonne August
Provost
Vice President for Academic Affairs

Honors Scholars Recognition

Janet Liou-Mark
Director of the Honors Scholars Program

Laura Yuen-Lau
Coordinator of the Honors Scholars Program

Research and Emerging Scholars Recognition

Pamela Brown
Associate Provost

Best Poster Awards

Reneta Lansiquot
*Assistant Director of the
Honors Scholars Program*



Cultivating Fine Dining Etiquette
Prof. Karen Goodlad
October 6, 2015

Honors In A Regular Course

Canvas: Drawing Graphics and Creating Animations in the Browser

Hibba Abbas

Prof. Marcos Pinto

*CST 4713: Dynamic Web Development:
Servlets and JSP*

Survival of the Pinkest: Breast Cancer in Young Women

Yasmin Abdallah

Prof. Zoya Vinokur

RAD 2325: Radiographic Procedures III

The Role of Sirtuins in *T. Thermophila*

Victor Adedara

Prof. William Lambert

BIO 3302: Microbiology

Cyber Crime and Strategic Security

Sara Aslam

Prof. Susan Serradilla-Smarth

CST 4700: IT Service Management

What Role Does Media Have on Stereotypes among College African American Males?

Aissatou Barry

Prof. Pa Her

*SBS 2000: Research Methods for the
Social and Behavioral Sciences*

How Long Will You Live?

Lisa Carrillo

Profs. Asok Chaudhuri and
Niloufar Haque

BIO 2311: Human Anatomy and Physiology I

Multiply Meanings of Graphic Symbols: Infograms for Anatomy and Physiology

Tristan Charran

Prof. Vasily Kolchenko

BIO 3350: Bioinformatics I

Bose-Einstein Condensation and Kinetics of Polariton Superfluid

Willie Cheung

Prof. Oleg Berman

PHYS 1442: General Physics II: Calculus Based

Connecting Mathematics Education to Social Issues: Design of Mathematical Tasks for Middle School Students

Saloua Daouki

Prof. Nadia Kennedy

*MEDU 4010: Supervised Student Teaching
and Seminar in
Middle School Mathematics*

What Happened to Leonardo's Body? The Meaning of Anatomical Proportion in Modern Painting

Hailin Du

Prof. Michael McAuliffe

ARTH 1103: Survey of Art History

Diet with Higher Fat Calories and its Consequences on Mice

Bora Durrsi

Prof. Sanjoy Chakraborty

BIO 3526: Pathophysiology

Impact of the Affordable Care Act (ACA) on the Healthcare Workforce

Adaoma Ejimbe

Prof. Randall Hannum

ECON 1101: Macroeconomics

Chinatown Food Tour Website

Kendra Guo

Prof. Anthony Holley

CST 2309: Web Programming I

Time Expense and Saving (TES) Tracker

Kendra Guo

Prof. Ari Vega

*CST 2301: Multimedia and
Mobile Device Programming*

Discovering the Core Essence of World Renowned Chefs

Ayako Hiratsuka

Prof. Robert Walljasper

HMGT 2303: Culinary Arts II

Measuring the Cost Effectiveness of Restaurant Tablets

Malika Ikramova

Prof. Edward Sanders

HMGT 1202: Food and Beverage Cost Control



NSF REU Cary Institute
July 10, 2015

Managing Human Resources in the Hospitality Industry

Malika Ikramova

Prof. Patrick O'Halloran

HMGT 1105: Lodging Operations Management

Survival of the Pinkest: Breast Cancer in Young Women

Beverley Khan

Prof. Zoya Vinokur

RAD 2325: Radiographic Procedures III

Salvation Behind the Closet Door

Felix Kurniawan

Prof. Eric Rodriguez

PSY 2402: Psychology of Personality

Rethinking Etiologies and Treatment of Neuropathology Based on the Meningeal Lymphatic System

Stella Lee

Prof. Niloufar Haque

BIO 2311: Human Anatomy and Physiology I

Analysis of a 1955-era Radio Frequency Generator and How a Unit of this Type could be Built Today

Jonathan Lockie
Prof. Viviana Vladutescu
EET 1202: Electrical Drafting

Computational Design of a Drug to Reverse the Effect of Alzheimer's

Christopher Mason
Prof. Mai Zahran
BIO 3356: Molecular Modeling in Biology

Research Arduino Microcontroller Sensor and Motor Systems

Anne Menmou
Prof. Edward Morton
EMT 2320: Advanced Mechanisms

Using Mobile Communication to Reduce Maternal and Infant Mortality

Michelle Negron-Leon
Prof. Noemi Rodriguez
HSA 4740: Health Research Methods

Using Mobile Communication to Reduce Maternal and Infant Mortality

Michelle Negron-Leon
Prof. Karen Bonsignore
HSA 4620: Health Care Information Systems

Income, Consumption, Investment and Interest Rate in Relation to the Economy

Ijeoma Ozueh
Prof. Alemi Piruz
ECON 1101: Macroeconomics

File Encryption with Public Key Crypto System

Alla Polisskaya
Prof. Brad Isaacson
MAT 2440: Discrete Structures and Algorithms

Monte Carlo Simulation of Popular Trivia Game Mobile Application (TriviaCrack Stat)

Muhammad Qureshi
Prof. Douglas Moody
CST 2301: Multimedia and Mobile Device Programming

Connecting Mathematics Education to Social Issues: Design of Mathematical Tasks for Middle School Students

Rushdha Rafeek
Prof. Nadia Kennedy
MEDU 4010: Supervised Student Teaching and Seminar in Middle School Mathematics

The Political Economy of the 2008 U.S. Financial Crisis

Ahsun Rasool
Prof. Piruz Alemi
ECON 1101: Macroeconomics

**James Joyce's
Self Portrayal in Dubliners:
Routine of Everyday Life and the
Effectiveness of the Coping Mechanisms**

Ahsun Rasool
Prof. Carole Harris
ENG 2001: Introduction to Literature I Fiction

**Web Application with
Google Map API Web Service**

Elvis Sanchez
Prof. Marcos Pinto
*CST 4713: Dynamic Web Development:
Servlets and JSP*

Deriving Rainbows from Calculus

Robert Serrano
Prof. Lin Zhou
MAT 1475: Calculus I

**Survival of the Pinkest:
Breast Cancer in Young Women**

Sylvia Shin
Prof. Zoya Vinokur
RAD 2325: Radiographic Procedures III

Monitoring and Controlling

Rupert Shrouder
Prof. Susan Serradilla-Smarth
CST 4800: Project Management

Storage Management

Rupert Shrouder
Prof. Susan Serradilla-Smarth
CST 4700: IT Service Management

**Immigration and the Workforce:
Does Immigration Help or Hurt
the American Workforce?**

Phillipa Williams
Prof. Megan Behrent
ENG 2000: Perspectives in Literature

**Micro-molding Fabrication of
Engineered Tissues**

Xavier Williams
Prof. Ozlem Yasar
MECH 2322: Engineering Materials

**Merchandise Planning and
Control for a Fashion Start-Up**

Ceyda Yildiz
Prof. Carol Brathwaite
MKT 1255: Merchandising Planning & Control



Honors Scholars Program Orientation
September 3, 2015

CUNY

Research Scholars

Advanced Design and Fabrication of Custom Prosthetic

Ehab Ahmad
Prof. Gaffar Gailani

Prediction of Hydrodynamic Vulnerability of Coastal Bridges to Extreme Storm Surges

Jonathan Akujobi
Prof. Gerarda Shields

Advanced Design and Fabrication of Custom Prosthetic

Muhammad Ameen
Prof. Gaffar Gailani

Advanced Design and Fabrication of Custom Prosthetic

David Amegavie
Prof. Gaffar Gailani

Advanced Design and Fabrication of Custom Prosthetic

Harold Barreto
Prof. Gaffar Gailani

Creating Active Learning Spaces in Virtual Worlds

Zianne Cuff
Prof. Reneta Lansiquot

Benefits of Expressive Writing: Improvements in Vagal Tone Over Time

Cherishe Cumma
Prof. Jean Hillstrom and Pa Her

Investigation of Scaffold Fabrication Techniques: Tissues Engineering for Reducing Medical Waste and the Environmental Impacts

Andres Delgado
Prof. Ozlem Yasar

Student's Matchmaker: An Internship Finder

Hector Feliz
Prof. Marcos Pinto

3D Nutrient Delivery Network Fabrication for the Engineered Tissues

Eddy Garcia
Prof. Ozlem Yasar

Novel Materials for Photonics and Optoelectronics

Andy He
Prof. German Kolmakov

Re-visualizing Brooklyn Tech: Architectural Archeology and Virtual Land Development

Ikrash Khan
Prof. Alan Lovegreen

The Role of Calpains in Oxidative Stress

Robin Koiner
Prof. Ralph Alcendor

Advanced Design and Fabrication of Custom Prosthetic

Rachid Moumni
Prof. Gaffar Gailani

Study of Two-dimensional Transition Metal Dichalcogenide Semiconductors:

MoS₂, MoSe₂, WS₂, WSe₂ and
Implementation of

Modern Physics Experiments in Undergraduate Laboratory

William Orton
Prof. Roman Kezerashvili

Lagrange and the Calculus of Variations

Yen Pham
Prof. Andrea Ferroggia

Prediction of Hydrodynamic Vulnerability of Coastal Bridges to Extreme Storm Surges

Jarren Sanderson
Prof. Gerarda Shields

Renewable Energy Conversion Technology

Ezra Stabler
Prof. Masato Nakamura

Stochastic Simulation of an Energy Conversion System: Modeling of a Combustion Chamber in a Waste-to-Energy (WTE) Power Plant

George Vanishvili
Prof. Masato Nakamura

Fabrication of Engineered Tissues with Micro-Molding

Xavier Williams
Prof. Ozlem Yasar

Emerging Scholars

Canvas: Drawing Graphics and Creating Animations in the Browser

Hibba Abbas
Prof. Marcos Pinto

Survival of the Pinkest: Breast Cancer in Young Women

Yasmin Abdallah
Prof. Zoya Vinokur

Optimizing Distance-dependent Long-range Interactions in Protein Structure

Sajjad Abedian
Prof. Armando Solis

Implementing an Online Quiz with Countdown Timer

Joe Nathan Abellard
Prof. Marcos Pinto

The Role of Sirtuins in T. Thermophilia

Victor Adedara
Prof. Ralph Alcendor

The Virtual Alpha Carbon Description in Protein Structure Analysis

Warner Alexis
Prof. Armando Solis

Selling Privacy in Social Media Networks

Ahmad Ali
Prof. Robert Leston

Survival of the Pinkest: Breast Cancer in Young Women

Amairani Amaro
Prof. Zoya Vinokur

Modernizing Legacy Java Applications through Automated Refactoring

Md Arefin
Prof. Raffi Khatchadourian

Understanding the Important Interaction between VEGFD and its Receptors

Sofia Azizi
Prof. Mai Zahran

Paint's Antimicrobial Properties Tested with Staphylococcus Epidermidis

William Bennett
Prof. Jeremy Seto

Understanding the Important Interaction between VEGFD and its Receptors

Najma Bibi
Prof. Mai Zahran

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Savannah Blodgett
Prof. Reneta Lansiquot

Organizational Planning and Evaluating within the Hospitality Industry

Jovany Bravo
Prof. Patrick O'Halloran

The Legal Concepts and Societal Concerns Related to Security Issues

Michelle Cantos
Prof. Patrick O'Halloran

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Juan Carpinteiro
Prof. Reneta Lansiquot

Understanding the Important Interaction between VEGFD and its Receptors

David Carvajal
Prof. Mai Zahran

A Vegetable Based pH Sensor

Jason Challenger
Prof. Nathan Astrof



Cultivating Fine Dining Etiquette
Prof. Karen Goodlad
October 6, 2015

Multiply Meanings of Graphic Symbols: Infograms for Anatomy and Physiology

Tristan Rashad Charran
Prof. Vasily Kolchenko

Bose-Einstein Condensation and Kinetics of Polarization Superfluid

Willie Cheung
Prof. Oleg Berman

Efficient Noise Filtering for Big Data

Rosemary Chinchilla
Prof. Ashwin Satyanarayana

The Relationship between Communication and Guest Services in the Hospitality Industry

Blanca Cortes
Prof. Patrick O'Halloran

Mathematical Modeling with Middle School Students: Exploring Impact

Saloua Daouki
Profs. Nadia Kennedy and
Ariane Masuda

Optical Processing Characteristics in a Clinical Psychiatric Sample

Rafael De Jesus
Prof. Daniel Capruso

Mechanics and Biomaterials of Tissue Scaffolds

Andres Delgado
Prof. Ozlem Yasar

Developing a New Pedagogy for Experiencing Mechatronics

Darya Dubouskaya
Prof. Muhammad Umy

Diet with Higher Fat Calories and its Consequences on Mice

Bora Durrsi
Prof. Sanjoy Chakraborty

Protein Structure Analysis and Prediction

Nataliya Ferdinand
Prof. Armando Solis

Using Next Generation Sequencing Technology to Elucidate Microorganisms

Fabiola Fontaine
Prof. Jeremy Seto

Characterization of Auphylococci from Built Environment

Manuela Hoyos Giraldo
Prof. Jeremy Seto

Benefits of Expressive Writing: Improvements in Vagal Tone Over Time

Dana Glatzer
Profs. Jean Hillstrom and Pa Her

Oral Cancer Diagnosis and Emerging Medical Technologies

Nephtali Guillomaitre
Prof. Laina Karthikeyan

Running Simultaneous Javascrpts with Web Worker

Preeti Gurung
Prof. Marcos Pinto

Diet with Higher Fat Calories and its Consequences on Mice

Devya Gurung
Prof. Sanjoy Chakraborty

Copper Binding Properties of Multi-target Compounds

Sarah Hambleton
Prof. Alberto Martinez

PCR Typing of the SCCmec Types

Abdul Haq
Prof. Jeremy Seto

Molecular Characterization of Deep-sea Black Corals

Clyde Harris
Prof. Mercer Brugler

Comparison of Free Vulnerability Scanners

Nolan Hu
Prof. Arup Das

Understanding the Important Interaction between VEGFD and its Receptors

Veronica Hurtado
Prof. Mai Zahran

Managing Human Resources in the Hospitality Industry

Malika Ikramova
Prof. Patrick O'Halloran

Teaching Religious Tolerance in an Age of Contention

Rafshanur Islam
Prof. Mark Noonan

The Role of Sirtuins in *T. Thermophila*

Omolaja Kabir
Prof. Ralph Alcendor

Survival of the Pinkest: Breast Cancer in Young Women

Beverley Khan
Prof. Zoya Vinokur

Toward a Publication-ready Model of Protein Kinase A

Elizabeth Kolmus
Prof. Mai Zahran

Salvation Behind the Closet Door

Felix Kurniawan
Prof. Eric Rodriguez

Optimizing Local Structure Distribution in Protein Structure Analysis and Prediction

Cristina Lai Zheng
Prof. Armando Solis

Neurological Diseases and Neurotherapy

Stella Jung Lee
Prof. Niloufar Haque

Diet with Higher Fat Calories and its Consequences on Mice

Nicole Madrazo
Prof. Sanjoy Chakraborty

Sustaining an Online Writing Program

Ricky Martinez
Prof. Reneta Lansiquot

Understanding the Important Interaction between VEGFD and its Receptors

Christopher Mason
Prof. Mai Zahran

Bose-Einstein Condensation and Kinetics of Polariton Superfluid

Oswaldo Minchala
Prof. Oleg Berman

Behavioral Neuroscience

Sheila Moaleman
Prof. Niloufar Haque

Advancing Microbes

Linallee Moreira
Prof. Elaine Leinung

Teaching Religious Tolerance in an Age of Contention

Samiul H. Mozumder
Prof. Mark Noonan

Mechanics of Tissue Scaffolds

Arturo Axel Murillo
Prof. Ozlem Yasar

The Role of Sirtuins in T. Thermophila

Faez Nafiu
Prof. Ralph Alcendor

Telemedicine to Improve Maternal/Infant Health Outcomes

Michelle Negron-Leon
Prof. Karen Bonsignore

Proposal for the Reintegration of Public Housing in New York City

Cindy Ocasio
Profs. Ting Chin and Jason Montgomery

Different Aspects of Web Application

Khadijah Okoh
Prof. Marcos Pinto

Fractional Calculus Differential Equations

Yen Pham
Prof. Satyanand Singh

Characterization of Auphylococci from Built Environment

Valentina Pineda
Prof. Jeremy Seto

Spherical Crash-free Aerial Craft

Tenzing Rabgyal
Prof. Xiaohai Li



Advancing Library Research Techniques
Prof. Anne Leonard
October 15, 2015

Mathematical Modeling with Middle School Students: Exploring Impact

Fathima Rafeek

Profs. Nadia Kennedy and
Ariane Masuda

Teaching Religious Tolerance in an Age of Contention

Anika Rahnum

Prof. Mark Noonan

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Mariah Rajah

Prof. Reneta Lansiquot

Document and Design

Hito Rodriguez

Prof. Lia Dikigoropoulou

Benefits of Expressive Writing: Improvements in Vagal Tone Over Time

Daniel Rosales

Profs. Jean Hillstrom and Pa Her

The Impression of Grand Architecture on Psychological Health and Being

Zakarya Samih

Prof. Michael Duddy

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Jessica Samide

Prof. Reneta Lansiquot

Web Application with Google Maps API Web Services

Elvis Sanchez

Prof. Marcos Pinto

Case Studies: Site Analysis Red Hook NYC

Ekaterina Sanko

Prof. Lia Dikigoropoulou

A Comparison between Gas-phase and Stellar Metallicity in SDSS Galaxies

Roberto Serrano

Prof. Viviana Acquaviva

Molecular Characterization of Deep-sea Black Corals

Abraham Setiawan

Prof. Mercer Brugler

Survival of the Pinkest: Breast Cancer in Young Women

Sylvia Shin

Prof. Zoya Vinokur

Design and Manufacturing of a Remote Controlled Mobile Robot

Eliyahu Shtauber

Prof. Angran Xiao

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Jodieann Stephenson
Prof. Reneta Lansiquot

Investigation of Scaffold Fabrication Techniques: Tissue Engineering

Joyce Tam
Prof. Ozlem Yasar

Chronicling the Achievements and Activities of Honors Scholars at City Tech

Jane Michelle Tan
Prof. Reneta Lansiquot

Document and Design

Claudia Tupayachi
Prof. Lia Dikigoropoulou

The Role of Sirtuins in *T. Thermophila*

Masood Usman
Prof. Ralph Alcendor

Simulation of Performative Envelope

Lu Chang Wang
Prof. Jihun Kim

Different Aspects of Web Application

Shanice Williams
Prof. Marcos Pinto

Different Aspects of Web Application

Gwenneth Worthy
Prof. Marcos Pinto

Investigation of Scaffold Fabrication Techniques: Tissue Engineering

Meleha Yousaf
Prof. Ozlem Yasar



National Society of Collegiate Scholars 2015 - 2016
Officers Charter Members (Prof. Lansiquot and Ms. Jones-Morton)
Advisors (Profs. Samaroo and Liou-Mark, Ms. Yuen-Lau)

Learning Communities Theme-Based Projects

How Math Talks to Us: Connecting the Languages of Symbols and Words

Sana Abdul, Roserie Adjodha, John Arevalo, Meghan Brown, Javaughn Farquharson, Dominique Francis, Amber Fraser, Solenny Garcia, Marigona Haxhaj, Monica Haye, Joselito Hernandez, Miguel Hierro, Nadira Kibria, Joshua Lumsden, Anilda Martinez, Nida Niaz, Jamie Nichols, Miftaah Pirzada, Prescilla Ramcharran, Mairelis Ramirez, Jonathan Smith, Jonathan Tabet
Prof. Ariane Masuda and
Suzanne Miller
MAT 0650: Elementary Algebra
ENG 1101: English Composition I

Taste the World

Guoxiong Lin, Zifeng Liu, Bao Ying Zhang, Dexuan Zhen
Prof. Karen Goodlad, Michael Krondl
and Laura Westengard
HMGT 1101: Perspectives in
Hospitality Management
HMGT 1102: Introduction to Food and
Beverage Management
ENG 1101: English Composition I

A View From Above: Writing and Visualizing Architectural Design

Cory Breegle
Prof. Alan Lovegreen and
Ramsey Dabby
ENG 1101: English Composition I
ARCH 1110: Architectural Design I:
Foundations
ARCH 1191: Visual Studies I



Discovery Times Square – Bodyworlds: Pulse
October 16, 2015

Ways of Seeing:

Adventures with Image and Text

Leonardo Barrales, Mirza Brackan, Marcus Ceron, Klever J Cobena, Ashley Fernandez, Jingyi Jiao, Jaichan Kirty, Romie Evander P Marcos, Brian K Mifsud, Ayano Morishima, Devin Morris Fields, Jason Murillo, Eftekar Nasser, Brandy E Ortiz, Khandaker Rishalatullah, Tyler Santiago, Ka Yee Tsang, Arthur E Tyce, Jimmel A Worrell, Xingfu Ye, Ying Yang Zhang
Profs. Jody Rosen and Jenna Spevack
ENG 1101: English Composition I
COMD 1100: Graphic Design Principles I

An Exploration of Effective Mathematics Pedagogy

Daniela Amigon, Sanaya Brown, Marina Felamon, Joshua Grillasca, Darnell James, Latina Laing, Justin Meyer, Rafael Regalado, Farjana Shati, Jian Sun, Samuel Wong, Noura Yasin
Profs. Andrew Douglas and Estela Rojas
MEDU 2010: Technology in Mathematics Education
MEDU 3011: Methods of Teaching Middle School Mathematics

Commonalities of Our Cultures

Aiyda Alshohatee, Ronaldo Carhuaricra, Kimberly Catorce, Anthony Gaudio, Marr Morel, Timothy Muroe, Marko Nedeljkovic, Kabir M Rafshan, Lovepreet Singh, Melissa Zephyr
Profs. Annie Ngana-Mundeke and Chandra Young
AFR 1130: Africana Folklore
ENG 092R: Developmental Reading Level II



University of Texas LSAMP Conference
September 11-12, 2015



Developing and Delivering Effective Research Poster Presentations
Prof. Jody Rosen
October 29, 2015

Special Projects

Liberal Arts Students: Establishing an Identity

Mandy Mei, Graphic Design Intern,
Faculty Commons Design Team
Prof. Julian Williams,
Liberal Arts Program Director

Abstract: How do Liberal Arts and Sciences students identify? This question led me to research the origins of the liberal arts. The Liberal Arts branding project establishes an identity for the program and its students by using print and web tools. The ultimate goal is to create a community where students can seek advisement and make informed choices based on the options and opportunities provided.

Water Resource Management of Fairview Lake

Sammy Ahmad, Alpha Bah, Fahed Bhutta, Joanna Bueno, Abdullah Chaudhry, Artur Ciecioro, Carlos De los Santos, Ryan Gabriel, George Glaraga, Kenneth Henley, Areeba Iqbal, Bahaa Judeh, Francisco Luthje, Liana Mohd Yatim Tan, Umair Nasir, Luis Nunez Adams, Byron Paladines, Victor Ramirez, Timothy Rampersaud, Hector Rodriguez, Ramon Romero, Jhangir Sarwar, Ngima Sherpa, Artur Szarzynski, Abdul Zaman, Jean Zile
CMCE 2454: Applied Hydraulics
Prof. Gerarda Shields

Abstract: A sample project site was selected in Tafton, PA. Students analyzed, designed and managed the water resources found in Fairview Lake and the surrounding watershed. First, the watershed was delineated and the amount of available water determined. A computer model was developed to route the water through the stream to determine flow and velocity. Students then designed a basic drinking water and wastewater treatment system for the community using the resources from the lake and stream.



National Society of Collegiate Scholars Induction Ceremony
October 22, 2015

Graph Theoretic Explorations Part I

Christopher Arevalo, John Davis,
Michael Dejesus, Jawed Hira,
Chee Hou Hon, Yudheer Manandhar,
Jessica Monge, Chris Petta, Don
Phelps III, Kenneth Smith, Jhon Tito
Cabanillas, Kaibin Wu, Raymond Yan
MAT 2540: Discrete Mathematics II
Prof. Satyanand Singh

Abstract: An important study in discrete mathematics is undirected and directed graphs which simplify complex practical problems. By coding in an appropriate software one can better understand and solve many practical problems. We illustrate these concepts by studying and encoding trees; subtrees; spanning trees; prim's algorithm and matrices using the Maple software.



NSF REU Society of Hispanic Professional Engineers Conference
Baltimore, MD
November 12-14, 2015

Graph Theoretic Explorations Part II

Kamel Berrani, Omari Brown, Collin
Clarke, Azddine Diouan, Johnny Feng,
Kurt Justin Gangaram, Naveen Grero,
Mark Haskins, Adam Humm, Yun
Fei Jiang, Nadia Khettane, Weihua
Kuang, Weichi Lee, Dalton Martillo,
Aminul Miah, Ayoola Ogunwuyi,
O'Dane Paulwell, Chethani Perera,
Sadaf Ramzan, Kevin Robinson,
Adilseit Seitgaziiev, Keith Smith,
Mauricio Vargas, Mason Vega, Cassius
Verneige, Andrew Wills, Yaoxin Zhang
MAT 2540: Discrete Mathematics II
Prof. Satyanand Singh

Abstract: An important study in discrete mathematics is undirected and directed graphs which simplify complex practical problems. By coding in an appropriate software one can better understand and solve many practical problems. We illustrate these concepts by studying and encoding trees; subtrees; spanning trees; prim's algorithm and matrices using the Maple software. We extend the work done in Part I.

The Infinitude of Primes in Certain Arithmetic Progressions

Sin Fong Chiu, Yanira Garcia,
Victor Lee, Justin Meyer, Fathima
Mohamed Rafeek, Erin Small,
Sonya Sultana, Mei Zhu
MAT 3021: Number Theory
Prof. Satyanand Singh

Abstract: In this study we consider Arithmetic Progressions (AP's) of the form $an+b$; where a and b are relatively prime integers. A sweeping generalization of Dirichlet shows that AP's with this property contain infinitely many primes. We will illustrate this process for certain special cases which has important applications in cryptography.

(NEST): FOSTERING THE CREATION OF EXCEPTIONAL MATHEMATICS AND TECHNOLOGY TEACHERS IN NEW YORK CITY

(Grant #1340007)

Optimal STEM Education in New York City

Lusine Gasparyan
Prof. Fangyang Shen



Museum of the Moving Image
November 6, 2015



NSF IUSE 2015 GEO Interns

NSF LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION (LSAMP) IN STEM

Mr. Marvin Bennett
Program Coordinator

Numerical Analysis of Waste-to-Energy Combustion Chambers

Joshua Afrifa
Prof. Masato Nakamura

Radios or Sensors – Which is the Best for Semi-/Non-autonomous Traffic?

Amadou Bah
Prof. Zory Marantz

Enterprise Web Application on Amazon Web Services

Ibrahima Barry
Prof. Ossama Elhadary

Elucidating Black Coral (Cnidaria: Anthozoa: Hexacorallia) Species Diversity in the Flower Garden Banks National Marine Sanctuary (Gulf of Mexico)

Craig Dawes
Prof. Mercer Brugler

Aerial Aid Navigation System

Jean Delgado-Caceres
Prof. Xiaohai Li

Graph Theory and Brain Connectivity

Thierno Diallo
Prof. Urmi Ghosh-Dastidar

AirCasting/Air Monitor Device

Fatime Elfatimi
Prof. Andy Zhang

Data Security in Embedded Computing Devices and RFID

Johnson Esenowo
Prof. Xin-Zhou Wei

Technology Driven Experiential Arts in Public Space around Elevators

Kelly Mendez
Prof. Xiaohai Li

Automatic Migration of Legacy Java Software

Olivia Moore
Prof. Raffi Khatchadourian

Evaluation of Novel Nuclear Introns within the Deep-Sea Black Coral *Stauropathes Arctica* (Cnidaria: Anthozoa: Hexacorallia: Antipatharia)

Lysna Paul
Prof. Mercer Brugler

**Compare Cancer Mutations
Stored in the Catalogue of
Somatic Mutations in Cancer
(COSMIC) and The Cancer Genome
Atlas (TCGA) Databases**

Taheefa Stephen
Prof. Evgenia Giannopoulou

**Star Chromatic Index of a
Complete Graph**

Marieme Toure
Prof. Simon Smith

**Comparative Analysis of Glycosylated
Photosensitizers Interaction with
Plasma Proteins**

Andrew Wills
Prof. Diana Samaroo

**NSF RESEARCH
EXPERIENCES FOR
UNDERGRADUATES
IN SATELLITE AND
GROUND-BASED
REMOTE SENSING AT
NOAA-CREST 2**

(NSF REU Grant # AGS-1062934)

Prof. Reginald Blake and
Janet Liou-Mark and
Ms. Laura Yuen-Lau

**A Proposed Remote Sensing
Early Warning Dura Home
Earthquake System**

Frederic Anglade
Prof. Alexander Aptekar

**Monitoring Land-Cover Changes in
Lake Urmia Basin Using
LandSat Imagery**

Amarou Bah
Prof. Hamidreza Norouzi

**Satellite Base Soil Moisture Product
Validation Using Ground Observations**

Christian Campo
Prof. Hamidreza Norouzi



Designing a Research Poster Presentation
Mr. Marvin Bennett
November 12, 2015

**The Feasibility Study of Using
Microwave Emission in Detecting
Drought and Land-Cover/ Land-Use
Change Studies**

Yanna Chen
Prof. Hamidreza Norouzi

**Quantitative Analysis of Generation
Processes of Greenhouse Gases
Emitted from Landfill Sites Using
Remote Sensing Data**

Tiffany Chong
Prof. Masato Nakamura

**Using Satellite Imagery to Monitor
Major Lakes; Case Study:
Lake Hamun and Lake Eyre**

Rezwon Islam
Prof. Hamidreza Norouzi

**Retrieving Vegetation Reflectance at
Beltsville Using Photosynthetically
Active Radiation (PAR) Sensor and a
Spectroradiometer Positioned at an
Unmanned Aerial Systems (UAS)**

Francois Mertil
Profs. Ricardo Saika, Siwei Li and
Demetrius Venable

**An Analytical Study Comparing the
Outcomes and Successes of a National
Science Foundation Research
Experiences for Undergraduates
(NSF REU) Program**

Ricky Santana
Profs. Janet Liou-Mark and
Reginald Blake

**Quantitative Analysis of Generation
Processes of Greenhouse Gases
Emitted from Landfill Sites Using
Remote Sensing Data**

Usaama Van
Prof. Masato Nakamura

**NSF GP-EXTRA:
RECRUITING AND
RETAINING
NON-GEOSCIENCE
MINORITY STEM
MAJORS FOR THE
GEOSCIENCE
WORKFORCE**

(NSF IUSE GEO Grant #1540721)
Profs. Reginald Blake, Janet Liou-Mark,
Hamidreza Norouzi, Viviana Vladutescu,
Ms. Laura Yuen-Lau

**Using Landsat Data to Detect
Lake Manitoba Changes Over Time**

Maen Caka
Prof. Hamidreza Norouzi

Comparison between Regular (Raw Material Extraction) and Urban Mining (Material Recovery) Methods

Andrew Greaves

Prof. Masato Nakamura

Monitoring the Changes of Dead Sea Area in Last 40 Years Using LandSat Observations

Charyssa Morgan

Prof. Hamidreza Norouzi

Geophysical Applications of LIDAR Systems

Kleber Perez

Prof. Viviana Vladutescu

Geophysical Applications of LIDAR Systems

Kennedy Samarakody

Prof. Viviana Vladutescu

NIH BRIDGES TO THE BACCALAUREATE PROGRAM

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Pa Her, Jean Hillstrom,
Janet Liou-Mark, Diana Samaroo,
Armando Solis, Tatiana Voza,
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(*Bridges Scholars are underlined.*)

Understanding VEGF-D and Computationally Designing its Synthetic Mimic

Zelda Nelson, Christopher Mason,
Andreas Mardt, Najma Bibi
Prof. Mai Zahran

Gender Differences in Vagal Tone Adaptation in an Expressive Writing Paradigm

Saber Ventura, Dana Glatzer,
Daniel Rosales, Cherishe Cumma
Prof. Jean Hillstrom and Pa Her

Intersections of Identifying Features in Medical Practice: Measurement, Outcomes, and the Role of Feminist Identity

Kimberley-Ann Basdeo,
Alexandra Nobel
Prof. Amanda Almond



Sony Wonder Technology Lab
September 22, 2015

**Recent Advances in
Efficacious Photosensitizers in
Photodynamic Therapy (PDT)**

Li Lin

Profs. Alberto Martínez and
Diana Samaroo

**Heterologous Studies of
Serotonin 2A Receptor**

Malik Barrett

Prof. Jeremy Seto

**Tailored Protocols for
DNA Extraction of Antipatharians**

Nicole BellaFlores-Mejia and

Eni Sejdini

Prof. Mercer Brugler

**Role of Oligodendrocytes and
Astrocytes in Multiple Sclerosis**

Ling Yang

Prof. Andleeb Zameer

**The Role of Tetrahymena Thermophila
Sirtuins in Oxidative Stress**

Jules Julenane

Prof. Ralph Alcendor

**The Role of Calpains in
Tetrahyman Thermophila**

Safaa Hassan

Prof. Ralph Alcendor

PEER LEADER TRAINING

funded by

**Black Male Initiative,
Perkins VTEA, and CUE**

Dr. A.E. Dreyfuss

**How can the Peer Leader engage
women in Workshop to develop
their skills in Statics?**

Amanda Hayley Brew

**How can a Peer Leader help students
overcome self-oriented behaviors?**

Sanya Brown

**How can semiotic mediation support
students' learning in a
Mathematics Workshop?**

Sarah Conyers

**How can the Peer Leader increase
students' deep learning in a
Mathematics Workshop?**

Joshua Grillasca

**How can students use real problems
to improve their knowledge
in Statics?**

Abubakarr Jalloh

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