

# 8<sup>th</sup> ANNUAL UHD STUDENT RESEARCH CONFERENCE



#### Sponsored by the UHD Scholars Academy

Funded by the

National Institute of General Medical Sciences (1T34GM079088-01), National Science Foundation (0336612, 0402623, 0734294, 0728408), U.S. Army Research Office (W911NF-04-1-0024), U.S. Department of Education (P120A050068, P120A070025), The Brown Foundation, and UH-Downtown

# A showcase of academic excellence demonstrated by UHD undergraduates majoring within the Colleges of Business, Humanities and Social Science, Public Service, and Sciences and Technology.

#### Friday, April 17, 2009

8:00 - 9:30 am	Registration and Continental Breakfast, Coffee House
9:30 am	<i>Dr. Max Castillo, President, University of Houston-Downtown</i> Welcoming Remarks, UHD Wilhelmina Cullen Robertson Auditorium
9:35 am	<i>Dr. Clete Snell, Chair and Associate Professor of Criminal Justice, UHD</i> Introduction of Keynote Speaker, Auditorium
9:40 - 10:10 am	Vicki King, Assistant Chief of Police Houston Police Department Keynote Speaker, Auditorium
10:15 - 11:15 am 11:20 - 12:20 pm	Oral Presentations, Session I, Auditorium Oral Presentations, Session II, Auditorium Introductions by <i>Dr. Vicky Estrera, Director, UHD Scholars Academy</i>
12:20 - 1:30 pm	Lunch Break
1:30 - 3:30 pm	Open Poster Sessions, Room A300

### **Conference Co-Chairs:**

Dr. Gene Preuss, Assistant Professor of History, UHD Dr. Jeong-Mi Yoon, Associate Professor of Mathematics, UHD

## **Conference Planning Committee:**

- Dr. Richard Alo, Executive Director, UHD Center for Computational Science, Professor of Mathematics
- Dr. Ermelinda DeLaVina, Associate Professor of Mathematics, UHD
- Dr. Vicky Estrera, Director, UHD Scholars Academy
- Dr. Weining Feng, Associate Professor of Engineering Technology, UHD
- Mr. Rene Garcia, Program Manager, UHD Scholars Academy
- Dr. Kenneth Johnson, Assistant Professor of Geology, UHD Dr. Marilyn McShane, Professor of Criminal Justice and Director of the
- Institute for Community Justice, UHD
- Dr. Lisa Morano, Associate Professor of Biology and Microbiology, UHD
- Dr. Kenneth Oberhoff, Assoc. Dean, UHD College of Sciences & Technology
- Dr. George Pincus, Dean, UHD College of Sciences and Technology
- Dr. Aimee Roundtree, Assistant Professor of English, UHD
- Dr. Larry Spears, Professor of Chemistry and Director of UHD Urban Center for Student Success in Science, Technology, Engineering and Mathematics
- Mrs. Mary Sykes, Lecturer of Finance, Accounting and CIS, UHD
- Dr. Akif Uzman, Chair of Natural Sciences Department, UHD
- Ms. Celeste Zamora, Media Relations Manager, Communications and Marketing, UHD

# **Oral and Poster Presentations:**

**29 - Alicia Corazon**, "On Total Domination and Caro-Wei of Graphs" UHD Faculty Mentor: **Dr. Ermelinda DeLaVina** Project Location: University of Houston-Downtown

42 - Micaela Gilbert, "The Spontaneously Hypertensive Rat (SHR) Model and Investigation of Glutathione Levels in Association with Renal Injury" Faculty Mentor: Dr. Peter Doris

Project Location: University of Texas Houston Health Science Center

51 - Jonathan Keele, "E-Learning Agent System with Argumentation Based Negotiation"

UHD Faculty Mentor: **Dr. Hong Lin** Project Location: University of Houston-Downtown

56 - Nguyen Lam, "DNA Microarray-Based Genome Hybridization of a Texas "Grape" and a California "Grape" strain of Xylella fastidiosa"

UHD Faculty Mentor: **Dr. Lisa Morano** Project Location: University of Houston-Downtown

75 - Nathan O'Rourke, "Tajikistan Political Risk: Communist past, Muslim future"

UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

83 - Laura Yecelia Sanchez, "Regulation of HOX gene expression by SAFB1" Faculty Mentors: Drs. Benny Kaipparettu and Steffi Oesterreich Project Location: Baylor College of Medicine

93 - Connie Villasmil, "Clouds Over Happiness: Birthmothers' Personality Characteristics 12-20 Years After Adoption Placement"

Co-Authors: Dr. Ruth G. McRoy (University of Texas at Austin), Dr. Harold Grotevant (University of Massachusetts at Amherst)

- UHD Faculty Mentor: Dr. Susan Henney
- Project Location: University of Houston-Downtown
- 97 Desiree Wilson, "Sensing the Harsh Environment: An Excellent Electrocatalyst for Fabrication of Sensors in Alkaline Media"
   UHD Faculty Mentors: Drs. Mian Jiang and Larry Spears
   Project Location: University of Houston-Downtown

## Poster Presentation Session I (1:30PM-2:15PM):

- 1 Diana Candy Abidin, Dwayne Hurd, Emily J. Skinner, "Memory for What, When, and Where in Humans"
- UHD Faculty Mentors: Drs. Stephanie Babb and Ruth Johnson Project Location: University of Houston-Downtown
- **3 Kethlyn Africa**, "Characterization of the shells of *Foraminifera in Salt Marsh*"

The UHD Scholars Academy (SA) is an academically competitive program in the College of Sciences and Technology (CST) that promotes scholarship and student success for undergraduate students majoring in Science, Technology, Engineering and Mathematics (STEM).

One Main Street, 725-North; Houston TX 77002-1001

UHD Faculty Mentor: **Dr. Brad Hoge** Project Location: University of Houston-Downtown

 5 - Berenice Alejandre, Nada Kassem, Susana Martinez, "Self-determination Theory: Understanding and Promoting Automony in a Hybrid Course" UHD Faculty Mentor: Dr. Christine Bachman
 Project Location: University of Houston-Downtown

7 - Mark Bryant Armstrong, "Wants and Needs Analysis of the STC-Houston Job Board"

UHD Faculty Mentors: **Drs. Aimee K. Roundtree and Wayne Schmadeka** Project Location: University of Houston-Downtown

```
9 - Nameera Fatima Baig and Rameshwari Korrapati, "TMOS and Carbon-60
based sensor for the detection of thiocyanates, Nitrites and Nitrates in
Environmental and Biological systems using Cyclic Voltammetry"
```

UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

11- Araly Barrera, "Assignment of ICD-9-CM Codes from Clinical-Free Medical Text"

UHD Faculty Mentor: Dr. Ping Chen

Project Location: University of Houston-Downtown

- 13 Brandy Bell and Juana Maria Olvera, "Thermal Analysis of Copper(II) Complexes Based on a New Binucleating 1,6-Diazecine Ligand"
- Co-Authors: Dr. Salah S. Massoud, Department of Chemistry, University of Louisiana at Lafayette

UHD Faculty Mentor: Dr. Janusz Grebowicz

Project Location: University of Houston-Downtown

15 - Elizabeth Jane Brogan, "eBooks and UHD: Findings from a Feasibility Study"

UHD Faculty Mentor: Dr. Aimee K. Roundtree Project Location: University of Houston-Downtown

17 - Tung Bui and Marsida Lisi, "Mathematical Modeling of the BMP4 and FGF Signaling Pathways during Neural and Epidermal Development in Xenopus laevis"

UHD Faculty Mentors: Drs. Edwin Tecarro and Akif Uzman Project Location: University of Houston-Downtown

- 19 Wendy Callejas and Juana Maria Olvera, "Thermal analysis of six new species of di-pyridyl ligands with Cu(II)"
- Co-Authors: Dr. Salah S. Massoud, Department of Chemistry, University of Louisiana at Lafavette

UHD Faculty Mentor: Dr. Janusz Grebowicz

Project Location: University of Houston-Downtown

- 21 Michael Cannon, Oralio Campos, Estela Castillo, Myrna Moctezuma, "Reversing the Air Pollution in China's Shanghai District"
   UHD Faculty Mentors: Drs. Merrilee Cunningham and Ruth Robbins
   Project Location: University of Houston-Downtown
- 23 Mirta Castro, Maria Cavazos, Chelsea Davidson, Raymond Rodriguez, "Combating the Loss of Biodiversity and Deforestation with the use of Carbon Credits"

UHD Faculty Mentors: Drs. Merrilee Cunningham and Ruth Robbins Project Location: University of Houston-Downtown

25 - Audrey Chatman, "Understanding Advertisements across Cultures: A Content Analysis of Consumer-Related Products in the United States and India"

UHD Faculty Mentor: **Dr. Aimee K. Roundtree** Project Location: University of Houston-Downtown

27 - Partha P. Choudhury, "The History of Nation-Building in Afghanistan" UHD Faculty Mentor: Dr. John Linantud Project Location: University of Houston-Downtown

**29 - Alicia Corazon**, "On Total Domination and Caro-Wei of Graphs" UHD Faculty Mentor: **Dr. Ermelinda DeLaVina** Project Location: University of Houston-Downtown

31 - Melissa Covington, "An Invitation to the Occasion: How do Birthmothers' Romantic Partners Participate in Adoption Openness?"

Co-Authors: Dr. Ruth G. McRoy (University of Texas at Austin), Dr. Harold Grotevant (University of Massachusetts at Amherst)

UHD Faculty Mentor: Dr. Susan Henney

Project Location: University of Houston-Downtown

**33 - Marlyn Davila**, "Novel Hydrogen Peroxide Electrocatalysis and its Application"

UHD Faculty Mentors: **Drs. Mian Jiang and Larry Spears** Project Location: University of Houston-Downtown

35 - Nicole Dyles, "Cultural Differences and Its' Effects on Disease Portrayal to Patients"

UHD Faculty Mentor: **Dr. Aimee K. Roundtree** Project Location: University of Houston-Downtown

 37 - Antoine Ferguson and Jarrett Kitchen, "Thermal Analysis of Oil Shales" UHD Faculty Mentor: Dr. Janusz Grebowicz
 Project Location: University of Houston-Downtown

39 - Esmeralda P. Garcia, "Relativistic Ab initio studies of Thorium with Chelating Agents"UHD Faculty Mentor: Dr. Maria Benavides

Project Location: University of Houston-Downtown

 41 - Stacy George, "How Antidepressant Drug Advertisements Create Regimes of Truth about Female Normalcy"
 UHD Faculty Mentor: Dr. Aimee K. Roundtree

Project Location: University of Houston-Downtown

43 - Audrey Gonzalez, "Multivariate Data Analysis: Relationship between Envrionmental Factors and Vector Frequenies Affecting the Spread of Pierce's Disease across Texas"

Co-Author: Ali Abedi

UHD Faculty Mentors: **Drs. Lisa Morano and Jeong-Mi Yoon** Project Location: University of Houston-Downtown

**45 - Michael Keith Grady, Elham Angela Hemmat, Shameika Mendes**, "Identifying Student Expectations and Perceptions: A Focus Group Experience"

UHD Faculty Mentor: Dr. Christine Bachman

Project Location: University of Houston-Downtown

47 - Sarah Hirsch, "The Marriage and Gender Gap Regarding a Proposed Ban on Handguns"

UHD Faculty Mentor: **Dr. David Branham** Project Location: University of Houston-Downtown

49 - Charles Ryan Jeffcoat, "Magmatic Evolution of the Early Cretaceous Deep Creek Pluton, W. Idaho"

UHD Faculty Mentor: **Dr. Kenneth Johnson** 

Project Location: University of Houston-Downtown

51 - Jonathan Keele, "E-Learning Agent System with Argumentation Based Negotiation"

UHD Faculty Mentor: **Dr. Hong Lin** Project Location: University of Houston-Downtown

53 - Rebecca Kern, "Collection of Collocation Events in Natural Language Processing"

UHD Faculty Mentor: **Dr. Ping Chen** Project Location: University of Houston-Downtown

**55 - Carlos Ramses Lacayo**, "Parsing Tree Matching Based Question" Co-Authors: **Timmothy Simmons, Dr. Wei Ding** UHD Faculty Mentor: **Dr. Ping Chen** Project Location: University of Houston-Downtown

57 - Liem Thanh Luong, "Improving Web Search Results with a Natural Language Filter"

UHD Faculty Mentor: **Dr. Ali Berrached** Project Location: University of Houston-Downtown

**59 - Lauren R. Mitchell**, "Identifying Houston: A Quasi-Discourse Analysis of Complimentary Handouts from the Holocaust Museum Houston"

UHD Faculty Mentor: **Dr. Aimee K. Roundtree** Project Location: University of Houston-Downtown

 61 - Mustafa Mehmood, "Relativistic Ab initio Studies of Thorium and Transferrin's Metal Binding Site Interactions"
 UHD Faculty Mentor: Dr. Maria Benavides

Project Location: University of Houston-Downtown

63 - Pantea Mohammadi and Nida Rizvi, "Ionomer Based Device for Eenvironmental Mmonitoring"

UHD Faculty Mentors: **Drs. Mian Jiang and Larry Spears** Project Location: University of Houston-Downtown

- 65 Blayne Mounger and Nicolas Spampinato, "Utilizing Genetically Engineered Escherichia Coli and Clostridium Acetobutylicum for Isoamyl Acetate Production"
- UHD Faculty Mentor: Dr. Catherine Shaffer

Project Location: University of Houston-Downtown

 67 - David Nanyes and Andrew Obiora, "Topographical Distribution and Survival Rate of Vector Mosquitoes at Glenwood Cemetery, 2008"
 UHD Faculty Mentor: Dr. Jeffrey Flosi
 Project Location: University of Houston-Downtown

**69 - Van Nguyen, Rosalinda Delgado, Yuricel Mondragon**, "One-Dimensional Hyperbolic Consevation Laws"

Co-Author: Cecilia Garcia UHD Faculty Mentor: Dr. Katarina Jegdic Project Location: University of Houston-Downtown

- 71 Matthew Ojeda and Karina Vazquez, "Handwashing Survey and Study of Microbial Ecology on Fomites at UHD"
   UHD Faculty Mentor: Dr. Jeffrey Flosi
   Project Location: University of Houston-Downtown
- 73 William Onyedebelu, "Partisanship, Education and Public Opinions on Handguns"

UHD Faculty Mentor: **Dr. David Branham** Project Location: University of Houston-Downtown

75 - Nathan O'Rourke, "Tajikistan Political Risk: Communist past, Muslim future"

UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

 77 - Kristi Pennington, "The Early Effects of Maxillary Expansion - A Clinical and Conebeam Computed Tomography Report"
 Faculty Mentors: Drs. Carin Domann and Chung How Kau
 Project Location: University of Texas Houston Health
 Science Center

**79 - Aswini Ramachandran**, "Evolution and Regulation of Gene Network" UHD Faculty Mentor: **Dr. Timothy Redl** Project Location: University of Houston-Downtown

 81 - Julia Russu, "Semiotic Analysis of Gendered Ethos by American and Japanese Car Companies"
 UHD Faculty Mentor: Dr. Aimee K. Roundtree
 Project Location: University of Houston-Downtown

83 - Laura Yecelia Sanchez, "Regulation of HOX gene expression by SAFB1" Faculty Mentors: Drs. Benny Kaipparettu and Steffi Oesterreich Project Location: Baylor College of Medicine

 85 - Stephen Seidel and Dennis Garcia, "DNA Fingerprinting Grape Isolates of Xylella fastidiosa throughout Texas"
 UHD Faculty Mentor: Dr. Lisa Morano
 Project Location: University of Houston-Downtown

**87 - Daniel Siddiqui**, "PID Controller for a Tank System" UHD Faculty Mentor: **Dr. Heider Malki** Project Location: University of Houston

**89 - Marika Stepankiw**, "Rhetorical Themes in Cancer Survivorship Blogs" UHD Faculty Mentor: **Dr. Aimee K. Roundtree** Project Location: University of Houston-Downtown

**91 - Huy Quang Truong**, "Iridium Oxide/Pencil "lead" Based pH Sensor" Co-Authors: **Daniel Kurukji** UHD Faculty Mentor: **Dr. Mian Jiang** Project Location: University of Houston-Downtown

93 - Connie Villasmil, "Clouds Over Happiness: Birthmothers' Personality Characteristics 12-20 Years After Adoption Placement"

Co-Authors: Dr. Ruth G. McRoy (University of Texas at Austin), Dr. Harold Grotevant (University of Massachusetts at Amherst)

UHD Faculty Mentor: **Dr. Susan Henney** Project Location: University of Houston-Downtown

 95 - Courtney Watts, "Evaluating Newton's Method for Approximating Real and Complex Roots of Various Functions"
 UHD Faculty Mentor: Dr. Timothy Redl
 Project Location: University of Houston-Downtown

 97 - Desiree Wilson, "Sensing the Harsh Environment: An Excellent Electrocatalyst for Fabrication of Sensors in Alkaline Media"
 UHD Faculty Mentors: Drs. Mian Jiang and Larry Spears
 Project Location: University of Houston-Downtown 99 - Bradley Wray, "Flip Party Respondents: The Dynamics of Democratic Party Disallegiance among Non-African Americans in the 2008 Presidential Election"

UHD Faculty Mentor: **Dr. David Branham** Project Location: University of Houston-Downtown

#### Poster Presentation Session II (2:15PM-3:00PM):

2 - Tolani Abiola, "Mexico Political Risk" UHD Faculty Mentor: Dr. John Linantud Project Location: University of Houston-Downtown

- 4 Javier Alamirra and Amber Martinez-Rodriguez, "The Impact of Parental Education on Students at UHD"
   UHD Faculty Mentors: Drs. Jon Aoki and Vicky Estrera
   Project Location: University of Houston-Downtown
- 6 Amy Aleman, "Columbia and its "Para politics"" UHD Faculty Mentor: Dr. John Linantud Project Location: University of Houston-Downtown
- 8 Felipe Ignacio Astorga, "Evolutionary characteristics of Paphiopedilum spp. Orchids"

Faculty Mentor: **Dr. Marcin Gorniak** Project Location: University of Gdansk, Poland

10 - Haydee Balderas, Kari Bustos, Araceli Castillo-Garcia, Aracely Oliva, Sandra Tapia Rojas, "Transportation-caused Air Pollution in Mexico City: A Drastic Public Policy Plan"

UHD Faculty Mentors: Drs. Merrilee Cunningham and Ruth Robbins Project Location: University of Houston-Downtown

12 - Brandy Bell and Charles Ryan Jeffcoat, "Strontium and Neodymium Isotope Study of Apatite from an Fe-oxide Cu-Au Ore Deposit, Bullrun Creek District, Oregon"

Co-Authors: Dr. ZdzisławBelka and J. Dopieralski, Adam Mickiewicz University, Poznan, Poland

UHD Faculty Mentor: **Dr. Kenneth Johnson** Project Location: University of Houston-Downtown

14 - Joseph Bradley, "Nigeria Political Risk: Is there Hope in West Africa?" UHD Faculty Mentor: Dr. John Linantud

Project Location: University of Houston-Downtown

16 - David Mark Brown, "Successful Word Sense Disambiguation Using TreeMatch"

Co-Author: Christopher Bowes UHD Faculty Mentor: Dr. Ping Chen Project Location: University of Houston-Downtown

**18 - Pamala N. Calip**, "Health or Wealth?" UHD Faculty Mentor: **Drs. Patricia Golemon and Aimee K. Roundtree** Project Location: University of Houston-Downtown

20 - Darena Canizalez, "India Political Risk: Moving towards Technological Innovation"

UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

22 - Flor S. Castro, "Evaluating Growth of Xylella fastidiosa Cultures through Biofilm Quantification"

UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

24 - Melissa Chan, "Carbon Embedded Silicon Dioxide Network for Trace Analysis"

UHD Faculty Mentor: **Dr. Mian Jiang** Project Location: University of Houston-Downtown

 26 - Melinda Chin and LaToya Green, "Finding the Most Reliable Path in a Complex Network"
 UHD Faculty Mentor: Dr. Shengli Yuan

Project Location: University of Houston-Downtown

 28 - Jessica Collins and Jonathan Jordan, "Developing a New "Model" Formulation: A Comparison of Two Oligomers and Two Photoinitiators" UHD Faculty Mentor: Dr. Byron Christmas
 Project Location: University of Houston-Downtown

- **30 Codi E. Court**, "To Tell or Not to Tell: Birthmothers' Adoption Disclosure to their Romantic Partners"
- Co-Authors: Dr. Ruth G. McRoy (University of Texas at Austin), Dr. Harold Grotevant (University of Massachusetts at Amherst)

UHD Faculty Mentor: Dr. Susan Henney Project Location: University of Houston-Downtown

- 32 Aaron M. Cowart, "Relationships After Adoption: Contact Between Birthmothers and Birthfathers 12-20 Years Post-Placement"
- Co-Authors: Dr. Ruth G. McRoy (University of Texas at Austin), Dr. Harold Grotevant (University of Massachusetts at Amherst)

UHD Faculty Mentor: Dr. Susan Henney

Project Location: University of Houston-Downtown

34 - Maryln Davila, Casianna Dominguez; Adolfo Lara; Jackie Nguyen, "Effectiveness of the Flu Vaccine in Reducing the Mortality Rate of Influenza in the United States"

Co-Author: Ali Abedi

- UHD Faculty Mentors: Dr. Vicky Estrera, Mitsue Nakamura Project Location: University of Houston-Downtown
- 36 Elena Espino, Elda Rueda, Renauda Helaire, "Development of UV-Polymerizable Model Formulations"

UHD Faculty Mentor: Dr. Byron Christmas

Project Location: University of Houston-Downtown

- 38 Bartlomiey Fryszczyn and Norma Pereida, "Protein Interactions and Structure Studies of the Transcriptional Modulator Ashwin"
- Co-Author: Dr. Amy Sater and Chih-Hong Lou, University of Houston Central

UHD Faculty Mentor: Dr. Akif Uzman Project Location: University of Houston-Downtown

40 - Edgar Alan Gatica, "Incorporating Protein Flexibility in Virtual Screening" Faculty Mentor: Dr. Claudio N. Cavasotto

Project Location: University of Texas Houston Health Science Center

42 - Micaela Gilbert, "The Spontaneously Hypertensive Rat (SHR) Model and Investigation of Glutathione Levels in Association with Renal Injury" Faculty Mentor: Dr. Peter Doris

Project Location: University of Texas Houston Health Science Center

44 - Audrey Gonzalez and Julio LaTorre, "Initial Analysis of Endophytes in Wild, Susceptible (European) and Hybrid Gravevines" UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

46 - Yvonne Hernandez and Justine Onyedebelu, "Building a Diatom Succession Model for a Fresh Water Marsh"

UHD Faculty Mentors: Drs. Bradleey Hoge and Ronald Barnes Project Location: University of Houston-Downtown

48 - Joseph Michael Irving and Shajeer Noorudeen, "Novel and Stereotypical Age-Related Changes in Retinal Synaptic Structure: Implications for Age-Related Vision Loss'

UHD Faculty Mentor: Dr. Jerry Johnson

Project Location: University of Houston-Downtown

50 - Jonathan Jordan and Tia Pilaroscia, "Multivariate Analysis of Fungal Populations along Buffalo Bayou"

UHD Faculty Mentor: Dr. Phil Lyons Project Location: University of Houston-Downtown

52 - Jeremy Kemp and J. Cole Brand, "Cluster Resources for UH-D Faculty and Students'

UHD Faculty Mentor: Dr. Hong Lin

Project Location: University of Houston-Downtown

54 - Suzette Khan, Ruben Larraga, Christine Varghese, Jaye Weston, ""I Believe I Can Fly"

Co-Author: Nguyen Lam UHD Faculty Mentors: Dr. Vicky Estrera, Mitsue Nakamura

Project Location: University of Houston-Downtown

56 - Nguyen Lam, "DNA Microarray-Based Genome Hybridization of a Texas 'Grape" and a California "Grape" strain of Xylella fastidiosa" UHD Faculty Mentor: Dr. Lisa Morano Project Location: University of Houston-Downtown

58 - Sunu Susan Mathew and Tao Tang, "Preparation and Application of Titania Based Detector"

UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

60 - Kim Moreno, "Designing Training Documentation for Enterprise Resource Planning Applications: A Participatory Approach"

UHD Faculty Mentors: Drs. Natalia Matveeva and Aimee K. Roundtree

Project Location: University of Houston-Downtown

62 - Mohamedwesam Mohamed, Sujan Bajracharya, "A Study of Genetic Diversity Within and Between Populations of the Endangered Species Hymenoxys texana (Coult. & Rose) Cockll. Using AFLP Analysis"

Co-Authors: German Ramirez, Midar Balimuttajjo

UHD Faculty Mentor: Dr. Deanna McCullough

Project Location: University of Houston-Downtown

64 - Claudia Moreno and Johnny Ramos, "Perfecting an Efficient Method for Identifying strains of Xylella fastidiosa with variable differences in the GyraseB gene"

Co-Author: Dennis Garcia

UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

- 66 Richard David Murphy, "Venezuela: A Country Struggling with Strongman Control" UHD Faculty Mentor: Dr. John Linantud Project Location: University of Houston-Downtown
- 68 Richard D. Nguyen, "Political Risk Indonesia: Political Paradoxes and American Implications"

UHD Faculty Mentor: Dr. John Linantud

Project Location: University of Houston-Downtown

70 - Cynthia Odika, "Does Age Make a Difference? The Impact of Education on Generational Voting in the 2008 Presidential Election"

UHD Faculty Mentor: Dr. David Branham

- Project Location: University of Houston-Downtown
- 72 Juana Maria Olvera, "Thermal Properties and Crystallization Kinetics of Poly(trimethylene terephthalate)/Poly(trimethylene isophthalate) Copolymers"
- Co-Authors: Russ Vison and Dr. Hoe Chuah, Shell Global Solutions, Houston, TX.

UHD Faculty Mentor: Dr. Janusz Grebowicz

Project Location: University of Houston-Downtown

- 74 Ee Lyn Ooi, "Inhibition of Dental Biofilms Using Commercial Mouthwashes'
- Co-Authors: Uffaf Khan, Laura Lucio, Alejandra Randle UHD Faculty Mentor: Dr. Poonam Gulati Project Location: University of Houston-Downtown
- 76 Nicolle Patterson, "Advancing Computational Methods for Protein Structure Determination: Rosetta + Footprinting"

Co-Author: Dr. Xiaojing Zheng

Faculty Mentor: Dr. Mark Chance

Project Location: Case Western Reserve School of Medicine

78 - Peter Vu Pham, "The Earth's Temperature is Rising: the Effects of Education and Political Ideology on Global Warming Attitudes" UHD Faculty Mentor: Dr. David Branham

Project Location: University of Houston-Downtown

80 - Marsha Ramesar-Babu, "Metals Leaching from Sulfide-poor Ores by Rainwater: An Example from the Bullrun Creek District, Oregon" UHD Faculty Mentor: Dr. Kenneth Johnson

Project Location: University of Houston-Downtown

82 - Danil Safin, "Simulation of Intelligent Traffic Controllers Using a Computational Grid"

UHD Faculty Mentor: Dr. Ongard Sirisaengtaksin Project Location: University of Houston-Downtown

84 - Jose Sanchez-Almonte, "Turkey Political Risk: An East or West Dilemma" UHD Faculty Mentor: Dr. John Linantud Project Location: University of Houston-Downtown

86 - Stephen Seidel, Timothy Morales, Domineca Pines, "Population Dynamics of Mosquitoes in Rural and Urban Harris County, Texas"

Co-Author: Jasmine Javadi

UHD Faculty Mentor: Dr. Jeffrey Flosi Project Location: University of Houston-Downtown

88 - Elizabeth Claire Simpson, "Diversity of Ascomycete Fungi in Coastal Prairie Grasslands Using rDNA Internal Transcribed Spacer Regions"

Co-Authors: Jose A. Arias, Annie Mann, Michael Salazar

UHD Faculty Mentor: Dr. Phil Lyons

Project Location: University of Houston-Downtown

**90 - Stephanie Thames**, "The Effects of Rising Ambient Temperatures on the Polar Bear Population of Alaska"

Co-Authors: Liliana Garcia, William Golden, Ebony Ivory, Audrey Gonzalez UHD Faculty Mentors: Dr. Vicky Estrera, Mitsue Nakamura Project Location: University of Houston-Downtown

 92 - Evelin Vaquiz, "Molecular-based Identification of Bacteria Within Dental Biofilms Before and After Treatment with Commercial Mouthwashes"
 Co-Authors: Natalie Sirisaengtaksin, Karen Martinez
 UHD Faculty Mentor: Dr. Poonam Gulati
 Project Location: University of Houston-Downtown

94 - Tabitha Ward, "Chemical Fingerprinting of Brewed Coffees as a Tool against Commodities Fraud"
UHD Faculty Mentor: Dr. Kenneth Johnson
Project Location: University of Houston-Downtown

96 - Crystal Rhea Wells, "Hispanic Attitudes on NAFTA: The Attitude Gap and the Education Effect on Public Opinion"
UHD Faculty Mentor: Dr. David Branham
Project Location: University of Houston-Downtown

**98 - Desiree Wilson**, "Purification and Thermoanalysis of Phosphonium Salts" UHD Faculty Mentor: **Dr. Tyra Montgomery** Project Location: University of Houston-Downtown

100 - Tejinder Yasini, "In-Group/Out-Group Biases of Fans' Perceptions of Referee Judgments in College Football"
UHD Faculty Mentor: Dr. Derek de la Pena
Project Location: University of Houston-Downtown

#### Acknowledgements

It is a pleasure to recognize the many individuals, organizations, and institutions supporting UHD students in their research endeavors. These include significant funding of on-campus research over the past year from the National Institute of General Medical Sciences (1T34GM079088-01), National Science Foundation STEP Program (DUE 0336612), National Science Foundation UBM Program (0734294), National Science Foundation S-STEM Program (0728408), U.S. Army Research Office HBCU/MI Infrastructure Support Program (W911NF-04-1-0024), U.S. Department of Education MSEIP Program (P120A050068, P120A070025), The Brown Foundation, Welch Foundation (BJ-0027), NASA, Shell Oil Co. and the University of Houston-Downtown. Many students conducted their research during summer research programs on and off-campus. Faculty and staff members of these and many other academic institutions, as well as personnel at industrial facilities, have done much to support and mentor our students.

In addition, we would like to thank the UHD faculty and staff who have worked tirelessly to support undergraduate research experiences as well as the UHD staff, faculty and administrators who have helped make this conference a success. We especially thank Drs. Richard Alo, Vicky Estrera, Weining Feng, Kenneth Oberhoff, Dennis Rodriguez, Larry Spears, Akif Uzman, Dean Susan Ahern, Dean Donald Bates, Dean Elizabeth Pelz, Dean George Pincus, and UHD President Max Castillo.

# Thank you for participating in the 8<sup>th</sup> Annual UHD Student Research Conference!

Please share your impressions of the event by completing a conference evaluation.

#### Thanks to the generous supporters of this student conference:

The Brown Foundation, Inc. National Institute of General Medical Sciences (Award No. 1T34GM079088-01) National Science Foundation (Award Nos. 0336612, 0402623, 0734294, 0728408) U.S. Army Research Office (Award No. W911NF-04-1-0024) U.S. Department of Education MSEIP (Award Nos. P120A050068, P120A070025) UHD Center for Computational Sciences UHD College of Sciences & Technology UHD Department of Computer & Mathematical Sciences UHD Department of Natural Sciences UHD President's Office UHD Scholars Academy





