

9th ANNUAL UHD STUDENT RESEARCH CONFERENCE



Sponsored by the UHD Scholars Academy

Funded by: National Institute of General Medical Sciences (1T34GM079088) National Science Foundation (0734294, 0728408, 0903948, 0934913) U.S. Department of Education (P120A070025) The Brown Foundation, Inc. University of Houston-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 30, 2010

| 8:00 - | 9:00 am | Registration and Continental Breakfast, Coffee House |
|------------------|---------|--|
| | 9:00 am | Dr. Mary Jo Parker, Director, UHD Scholars Academy Masters of Ceremony, UHD Wilhelmina Cullen Robertson Auditorium |
| | 9:05 am | Dr. William Flores, President, University of Houston-Downtown Welcoming Remarks, Auditorium |
| | 9:15 am | Akif Uzman, Chair and Professor, Department of Natural Sciences, UHD Introduction of Keynote Speaker, Auditorium |
| 9:15 - | 9:50 am | Vedangi Sample, 2003 UHD Alumna and Post-Doctoral Fellow Johns Hopkins University School of Medicine Keynote Speaker, Auditorium |
| 9:50 - 11:00 am | | Oral Presentations, Session I, Auditorium |
| 11:10 - 12:20 pm | | Oral Presentations, Session II, Auditorium |
| 12:20 - | 1:30 pm | Lunch Break |
| 1:30 - | 3:30 pm | Open Poster Sessions I & II, Special Events Room A300 |

Conference Co-Chairs:

Dr. Ermelinda DeLaVina, Associate Professor of Mathematics, UHD Dr. Gene Preuss, Assistant Professor of History, UHD

Conference Planning Committee:

- Dr. Richard Alo, Executive Director, UHD Center for Computational Science, Professor of Mathematics
- 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. Mary Jo Parker, Director, UHD Scholars Academy
- 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
- Dr. Ruth Robbins, Professor of Finance, Accounting and CIS, UHD
- Mrs. Mary Sykes, Lecturer of Finance, Accounting and CIS, UHD
- Dr. Akif Uzman, Chair and Professor, Natural Sciences Department, UHD
- Dr. Jeong-Mi Yoon, Associate Professor of Mathematics, UHD
- Ms. Celeste Zamora, Media Relations Manager, Communications and Marketing, UHD

Oral and Poster Presentations:

 Seyed Alireza Abedi, "Evaluation of Xylem-Feeding Insects in Texas Vineyards: Distribution along State-wide Environmental Gradients" UHD Faculty Mentors: Drs. Lisa Morano and Jeong-Mi Yoon Project Location: University of Houston-Downtown 27 - Melissa Chan, "Modulation of Production Methods of Copper Oxide Crystalline Arrays Created by Chemical Bath Deposition"
Co-Authors: Izabella Bobowska, Piotr Wojciechowski
UHD Faculty Mentors: Drs. Mian Jiang and Larry Spears
Project Location: Lódz, Poland

 28 - Margharet Chavez, Alisam Sunsana, Elias Rodriguez, William Matthews, Cynthia Wood, "Offer in Compromise"
 UHD Faculty Mentor: Dr. Darshan Wadhwa
 Project Location: University of Houston-Downtown

37 - Leonard Morgan Dees, "Using the Multi-Functional Smart Vibration Platform in the Development of Innovative Learning Modules"
UHD Faculty Mentor: Dr. Weining Feng
Project Location: University of Houston-Downtown

43 - Luis Galindo, "The State of Welfare in the United Kingdom" UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

62 - Carlos Ramses Lacayo, "Applying Software Engineering Techniques to Create a Game using Microsoft XNA Framework"
UHD Faculty Mentor: Dr. Chang Yun
Project Location: University of Houston

79 - Elda Rueda and Irena Sigel, "Spatial Distribution of Metabolic Enzymes in Adult Mouse Retina: Implications in Vision Preservation"
Co-Author: Dr. Donald Fox, University of Houston College of Optometry UHD Faculty Mentor: Dr. Jerry Johnson
Project Location: University of Houston-Downtown

 81 - Allison Sandlin, "Compulsory Culture Assimilation of Native Americans Negatively Influences Their Education"
 UHD Faculty Mentor: Dr. Theresa Case
 Project Location: University of Houston-Downtown

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

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

 Seyed Alireza Abedi, "Evaluation of Xylem-Feeding Insects in Texas Vineyards: Distribution along State-wide Environmental Gradients" UHD Faculty Mentors: Drs. Lisa Morano and Jeong-Mi Yoon Project Location: University of Houston-Downtown

3 - Victor Acevedo, Felipe Arreola, Erick Cruz, Luis Hernandez, Jaime Trujillo, "High Strength Light Weight Concrete"

UHD Faculty Mentors: **Drs. Alberto Gomez-Rivas and Jorge Tito-Izquierdo** Project Location: University of Houston-Downtown

5 - Rogelio Acuna, "Analysis of Project Planning Using CPM and PERT" UHD Faculty Mentor: Dr. Timothy Redl Project Location: University of Houston-Downtown

7 - Nancy Adossi, "Rwanda - A potential time bomb" UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

 9 - Naeem Ali, "Study of polypyrrole-carbon composites and overoxidation of polypyrrole network"
 UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

 11 - Victoria Austin, "Values, Actions, and Life Satisfaction: What Role Does Character Play?"
 UHD Faculty Mentor: Dr. Derek de la Pena

Project Location: University of Houston-Downtown

 13 - Philip Ashgon Ayazi, Monica Villescas, "A Comparison of Mechanical Properties in Bio-derived and Synthetic Polyesters"
 UHD Faculty Mentor: Dr. Byron Christmas
 Project Location: University of Houston-Downtown

 15 - Jesus I. Barron-Aldana and Mustafa Mehmood, "Molecular Modeling of RAG1 Protein Binding Domain and DNA"
 UHD Faculty Mentor: Dr. Maria Benavides
 Project Location: University of Houston-Downtown

 17 - Tonya Bauch and Ricardo Hernandez, "The Study of the Synthesis of Acrylate Functionalized Few-walled Carbon Nanotubes"
 UHD Faculty Mentor: Dr. Tyra Montgomery
 Project Location: University of Houston-Downtown

19 - Isishulet Berruete, Savannah Rogers, Steven Salazar, "Queens: Out of the Gutter"

UHD Faculty Mentors: **Drs. Merrilee Cunningham and Shohreh Hashemi** Project Location: University of Houston-Downtown

21 - Christian Monique Billow, Eva Marie Ferretiz, Tibisay Guzman, Mirian Eleonora Lopes de Sousa, Jasmine Emerald Zapata, "Industrial Air Pollution in Cairo, Egypt and Bacterial Infections of the Lungs"

UHD Faculty Mentors: **Drs. Merrilee Cunningham and Shohreh Hashemi** Project Location: University of Houston-Downtown

23 - Jennifer Carmichael and Nameera Fatima Baig, "The Effects of Few-Walled Carbon Nanotubes and Photoinitiator Concentration on the Number of "Trapped" Free Radicals and the Thermomechanical Properties of UV-Polymerizable Systems"

UHD Faculty Mentor: Dr. Byron Christmas

Project Location: University of Houston-Downtown

 25 - Flor S. Castro, "Developing a Method to Evaluate Xylella fastidiosa Growth with a Xylem Fluid Solution"
 UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

 27 - Melissa Chan, "Modulation of Production Methods of Copper Oxide Crystalline Arrays Created by Chemical Bath Deposition"
 Co-Authors: Izabella Bobowska, Piotr Wojciechowski

UHD Faculty Mentors: **Drs. Mian Jiang and Larry Spears** Project Location: Lódz, Poland

29 - Preeti Choudhary, "Novel Apllication of Homogenous Electrocatalysis with Conventional Dyes"

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

 31 - Jessica Collins, "Detection and Analysis of Laccase Genes from Soil Ascomycetes via a Metagenomics Approach"
 UHD Faculty Mentor: Dr. Phil Lyons
 Project Location: University of Houston-Downtown **33 - Rafael Cruz Ortiz**, "Ways to Improve Text Categorization" UHD Faculty Mentor: **Dr. Ping Chen** Project Location: University of Houston-Downtown

35 - Marlyn Davila, Mitesh Koirala, Aaron McBurney, "Subspecies Identification of Seven Unknown Xylella fastidiosa Cultures using Multiple Molecular Approaches"

UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

37 - Leonard Morgan Dees, "Using the Multi-Functional Smart Vibration Platform in the Development of Innovative Learning Modules"
UHD Faculty Mentor: Dr. Weining Feng
Project Location: University of Houston-Downtown
20. Comis Edwards Elford Change Town Martin Dhenda Amount Vibration

39 - Carrie Edwards, Elfego Chavez, Teeya Martin, Rhonda Asmore, Vivian Flores, Nalleli Espinosa, "Clean Energy Solutions to Air pollution in Mexico"

UHD Faculty Mentors: **Drs. Merrilee Cunningham and Shohreh Hashemi** Project Location: University of Houston-Downtown

41 - Marlon Forero, Andy Liu, Jonathan Palacios, Massiel Rubio, "Cloning: Will There Ever Be Another You?"

Co-Authors: Andreau Berry and Reuben Rodriguez UHD Faculty Mentor: Mitsue Nakamura

Project Location: University of Houston-Downtown

43 - Luis Galindo, "The State of Welfare in the United Kingdom" UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

45 - Kendal Muennink, Jose Galvan, Stephanie Hernandez, "Industrial Pollution in Tokyo, Japan"

UHD Faculty Mentor: **Drs. Merrilee Cunningham and Shohreh Hashemi** Project Location: University of Houston-Downtown

47 - Roberto Carlos Garcia, Shihliang Kai, Jennifer Melendez, Oscar

Trevino, Kendalyn Freeman, "Gang Domination in Juarez, Mexico" UHD Faculty Mentors: **Drs. Merrilee Cunningham and Shohreh Hashemi** Project Location: University of Houston-Downtown

49 - Myrian Garrett and Michelle Winfield, "Analyzing Ethnicity as it relates to relatedness and the need for cognition"

UHD Faculty Mentor: Dr. Christine Bachman

Project Location: University of Houston-Downtown

51 - Audrey Gonzalez and Gloria Abarca, "Analysis of Endophytes in Wild, Susceptible (European) and Hybrid Grapevines"

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

53 - Brian Holtkamp, Steve Leon, Alonzo Loreto, James Lumpkin, Ceraira Snerling Simmons, "Schizophrenia"

Co-Authors: **Triston Batts and Anisa Saleh** UHD Faculty Mentor: **Mitsue Nakamura**

Project Location: University of Houston-Downtown

55 - Tina Jarrell and Belinda J. Martinez, "Mandatory Volunteering; Helpful or Hurtful?"

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

57 - Nirmal John and Christine Varghese, "Novel and Rapid Determination of Threat Agents by Voltammetry and Chronoamperometry"

UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

59 - Russell Kendrick, "Mathematical Analysis of Biofilm Growth for

Pseudomonas aeruginosa and Mycobacterium" UHD Faculty Mentor: **Dr. Gulati, Dr Chan** Project Location: University of Houston-Downtown

61 - Mitesh Koirala, Adolfo Lara, Matthew Ojeda, "Analyzing the Genome of a Xylella fastidiosa Grape Strain from Texas"

UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

63 - Anne Maredia, "History, Analysis, and Implementation of Traveling Salesman Problem (TSP) and Related Problems"

UHD Faculty Mentor: Dr. Timothy Redl

Project Location: University of Houston-Downtown

 65 - Mustafa Mehmood, "Computational Studies of 1-Butyl-n-Methylpyridinium Tetrafluoroborate Ionic Liquids"
 UHD Faculty Mentor: Dr. Maria Benavides
 Project Location: University of Houston-Downtown

67 - Oyeyemi Omotoso, "Feelings and Experiences of Liver and Pancreatic Cancer Survivors Online: A Content Analysis"
UHD Faculty Mentor: Dr. Aimee K. Roundtree
Project Location: University of Houston-Downtown

69 - Norma Pereida and Margie Swink, "Ashwin Protein Structure, Function, and Evolution"UHD Faculty Mentor: Dr. Akif Uzman

Project Location: University of Houston-Downtown

71 - Jennifer Phillips, "Armenia: Nearly A Century After Genocide" UHD Faculty Mentor: Dr. John LinantudProject Location: University of Houston-Downtown

 73 - Kelly Phillips and Stephen Joe Siedel, "Determining the Genetic Relatedness of Xylella isolates using SSR sequences"
 UHD Faculty Mentor: Dr. Lisa Morano
 Project Location: University of Houston-Downtown

75 - Hossein Rajabian, "Turkey: Country Report" UHD Faculty Mentor: **Dr. John Linantud** Project Location: University of Houston-Downtown

77 - Mark Riddell, "User Acceptance of the Preferred Reading of Healthcare Facility Images on the Web"
UHD Faculty Mentor: Dr. Aimee K. Roundtree
Project Location: University of Houston-Downtown

79 - Elda Rueda and Irena Sigel, "Spatial Distribution of Metabolic Enzymes in Adult Mouse Retina: Implications in Vision Preservation"

Co-Author: **Dr. Donald Fox, University of Houston College of Optometry** UHD Faculty Mentor: **Dr. Jerry Johnson** Project Location: University of Houston-Downtown

 81 - Allison Sandlin, "Compulsory Culture Assimilation of Native Americans Negatively Influences Their Education"
 UHD Faculty Mentor: Dr. Theresa Case
 Project Location: University of Houston-Downtown

 83 - Aliona Shadrova, Brunno Luis, Craig Heitmiller, Remi Amos, Sonia Harb, "HIV/AIDS Epidemic in Shanghai"
 UHD Faculty Mentors: Drs. Merrilee Cunningham and Shohreh Hashemi

Project Location: University of Houston-Downtown

85 - Teena Thomas, "A Facile and Cost-Effective Method for Nitrogen-Containing Compounds"UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

87 - Victor Isaac Trejo, "Analysis and Numerical Study of Conservation Laws" UHD Faculty Mentor: **Dr. Katarina Jegdic** Project Location: University of Houston-Downtown

89 - Charles Varghese and Israel Ignacio Sierra, "Determination of Azide Based on its Transition Metal Ion Complexes and Electrocatalysis"

UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

 91 - Brian Waddle, "Analysis of Audience Responses and Expectations of Event Invitation Typefaces"
 UHD Faculty Mentor: Dr. Aimee K. Roundtree

Project Location: University of Houston-Downtown

93 - Lindsey White, "Podcasting In Higher Education Public Relations" UHD Faculty Mentor: **Dr. Aimee K. Roundtree** Project Location: University of Houston-Downtown

 95 - Desiree Wilson, "Expression of Type II Insulin- like growth factor receptor on lymphoma & Leukemia Cell lines"
 UHD Faculty Mentor: Dr. Hesham Amin

Project Location: University of Texas M.D. Anderson Cancer Center

Poster Presentation Session II (2:30PM-3:30PM):

2 - Victor Acevedo, Felipe Arreola, Erick Cruz, Luis Hernandez, Jaime Trujillo, "Post-Tension Beam: High Strength"

UHD Faculty Mentors: Drs. Alberto Gomez-Rivas and Jorge Tito-Izquierdo Project Location: University of Houston-Downtown

4 - Victor Acevedo, Felipe Arreola, Erick Cruz, Luis Hernandez, Jaime Trujillo, "Dynamics 101: Natural Frequency"

UHD Faculty Mentors: Drs. Alberto Gomez-Rivas and Jorge Tito-Izquierdo Project Location: University of Houston-Downtown

6 - Maria Onazine Adegbenro and Ava Luz Cecellia Garcia, "Self-

Determination Theory: Students' Ethnicity and Gender in Relation to their Sense of Autonomy and Competence"

UHD Faculty Mentor: Dr. Christine Bachman

Project Location: University of Houston-Downtown

- 8 Cory Ali, Lassana Samarakoon, Glenda L. Thammavongsa, "Diatoms as Indicators of Wetland Mitigation Succession"
- UHD Faculty Mentors: Drs. Bradley Hoge and Ronald Barnes

Project Location: University of Houston-Downtown, Greens Bayou Wetlands Mitigation Bank, Sheldon Lake State Park, and Anahuac National Wildlife Refuge

10 - Daniel anthony Arp, "Investigating Whether Sociology Textbooks Contain Gender Bias"

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

12 - Philip Ashgon Ayazi, "Producing New High Speed Dispersion Techniques" UHD Faculty Mentor: **Dr. Byron Christmas** Project Location: University of Houston-Downtown

14 - Nameera Fatima Baig, "Exploration of Anchoring Techniques for Fabricating Effective Sensors"

Co-Author: **Tomasz Mazalek, Technical University of Lódz, Poland** UHD Faculty Mentors: **Drs. Mian Jiang and Larry Spears** Project Location: University of Houston-Downtown

 16 - Tonya L. Bauch, "The Investigation of Population Compositions and Dynamics of Necrophagous Insects Invading Vertebrate Animal Cadavers" UHD Faculty Mentor: Dr. Jeffrey Flosi
 Project Location: University of Houston-Downtown

18 - Meishon Bell, Taquisia DeWitt, Vanessa Martinez, Courtney Ruff, "Object, Spatial, and Temporal Memory: A Behavioral Analysis of Visual Scenes Using the What-Where-When Paradigm"

UHD Faculty Mentors: **Drs. Stephanie J. Babb and Ruth M. Johnson** Project Location: University of Houston-Downtown

20 - Ashley Bilbrey, "Reducing the Viscosity of an Acrylate-Functional Epoxy Oligomer with Aqueous Salt Solutions"

UHD Faculty Mentor: Dr. Byron Christmas

Project Location: University of Houston-Downtown

22 - Melissa Campos, Patricia Hernandez, Brittany Smith, "The Boundaries of Discipline: A study of Parental Perception"

UHD Faculty Mentor: Dr. Susan Henney

Project Location: University of Houston-Downtown

24 - Teena Castleberry, Tracy Chanthavong, Ali De Hoyos, Aileen Fairless, "Assessing the Effects of Memory Consolidation in Object, Spatial, and Temporal Memory"

UHD Faculty Mentors: Drs. Stephanie J. Babb and Ruth M. Johnson Project Location: University of Houston-Downtown

26 - Melanie Cauthen, Halit Dilber, Jordan Howland, Jose Ventura, "Heart Rate Reducers"

Co-Authors: Harmon Ye and Jose Trinidad

UHD Faculty Mentor: Mitsue Nakamura

Project Location: University of Houston-Downtown

 28 - Margharet Chavez, Alisam Sunsana, Elias Rodriguez, William Matthews, Cynthia Wood, "Offer in Compromise"
 UHD Faculty Mentor: Dr. Darshan Wadhwa

Project Location: University of Houston-Downtown

30 - Carlandrea Clark, "Where Color is King: Skin Color Symbols and Stereotypes in the film Precious"

UHD Faculty Mentor: Dr. Aimee K. Roundtree

Project Location: University of Houston-Downtown

32 - Erick Cruz, Shitul Maisuria, Yuhanna Njeim, "Dynamic Behavior of Pedestrian Bridges'

UHD Faculty Mentors: Drs. Alberto Gomez-Rivas and Jorge Tito-Izquierdo Project Location: Memorial Dr and Waugh Dr Intersection

- 34 Jennifer Davidson, Kristine Matthews, Kristen Sudduth, "Online Degree Program Student Characteristics"
- UHD Faculty Mentors: Drs. Cindy Stewart, Christine Bachman and Ruth Johnson

Project Location: University of Houston-Downtown

36 - Theresa de Anda, "Can Facebook Benefit Those with Chronic Illnesses?" UHD Faculty Mentor: Dr. Christine Bachman Project Location: University of Houston-Downtown

38 - Edgar Diaz, Reinaldo Mohammed, Katherine Nguyen, Derek Smith, and Dayna Spencer, "Comparison of Pollution Levels, Technology, and Preventive Methods between the United States, Germany, China & France" Co-Author: Audrey Gonzalez

UHD Faculty Mentor: Mitsue Nakamura

Project Location: University of Houston-Downtown

40 - Elena Espino, "Metabolic Effects of 3-BrOP on Pancreatic Cancer Cells" Co-Author: Marcia Ogasawara UHD Faculty Mentor: Dr. Peng Huang Project Location: MD Anderson Cancer Center

42 - Cynthia Ava Jean French, "Should Birthmothers' Romantic Partners Get Involved or Stay Out of Adoptions?"

Co-Authors: Susan Ayers-Lopez, Ruth G. McRoy, Hardel D. Grotevant UHD Faculty Mentor: Dr. Susan Henney

Project Location: University of Houston-Downtown

44 - Alma Galvan and Leah Spurling, "Parental Responses to Non-Parental Discipline: An Analysis of Parental Attitudes, Behaviors, and Emotions" UHD Faculty Mentor: Dr. Susan Henney Project Location: University of Houston-Downtown

46 - Dennis Garcia, "Condensin II-mediated Telomere Positioning and Telomere-lamina Interaction in Drosophila melanogaster" UHD Faculty Mentor: Dr. Giovanni Bosco Project Location: University of Arizona

48 - Walter Garcia, "Environmental Data Analysis" UHD Faculty Mentor: Dr. Ping Chen Project Location: University of Houston-Downtown

50 - Edgar Alan Gatica, "Programming Using Flowcharts" UHD Faculty Mentor: Dr. Ongard Sirisaengtaksin Project Location: University of Houston-Downtown

52 - Laura Hawkins, Tyra LeBeau, Maria Elena Richard, "Functional Analysis of Object, Spatial, and Temporal Memory" UHD Faculty Mentors: Drs. Stephanie J. Babb and Ruth M. Johnson

Project Location: University of Houston-Downtown

54 - Abdul Jangda, "Practical Applications of Voltammetric Determination of Alkali Metal Ions Using Conducting Polymers"

UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

- 56 Charles Ryan Jeffcoat, "Early Cretaceous Magmatism in the Blue Mountains Province of Western Idaho: Constraints from U-Pb (SHRIMP-RG) Geochronology and REE Geochemistry of the Deep Creek Pluton"
- Co-Authors: Dr. Joshua J. Schwartz, University of Alabama, and Dr. Joe Wooden, Stanford University

UHD Faculty Mentor: Dr. Kenneth Johnson

Project Location: University of Houston-Downtown and Western Idaho

58 - Erica Louise Kelley and Christen Leigh Dann, "How Gender, Gender Role Attitudes, and Race Influence College Major Selection" UHD Faculty Mentor: Dr. Anne Rinn Project Location: University of Houston-Downtown

60 - Jarret Kitchen, "Thermal Analysis of Cu(II) Complexes" Co-Author: Dr. Salah Massoud, University of Louisiana at Lafayette UHD Faculty Mentor: Dr. Janusz Grebowicz Project Location: University of Houston-Downtown

62 - Carlos Ramses Lacayo, "Applying Software Engineering Techniques to Create a Game using Microsoft XNA Framework" UHD Faculty Mentor: Dr. Chang Yun Project Location: University of Houston

64 - Michael Anthony McFail, "Automatic Detection of Collocation" Co-Author: Stanley E. Roberts UHD Faculty Mentor: Dr. Ping Chen Project Location: University of Houston-Downtown

- 66 Bertha Montemayor, "Loving Thy Self with Character" UHD Faculty Mentor: Dr. Derek de la Pena Project Location: University of Houston-Downtown
- 68 Sebastian Palomo and Maria Garrett, "Impact of the U.S. Subprime Mortgage Crisis on the Colombian Economy as Measured by the Financial Market Data" UHD Faculty Mentor: Dr. Chu Nguyen

Project Location: University of Houston-Downtown

70 - Minh Phan, "Country Report on Russia"

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

72 - Kelly Phillips, "Hunting for Xylella fastidiosa in Petioles from a North Texas Vineyard"

UHD Faculty Mentor: Dr. Lisa Morano

Project Location: University of Houston-Downtown

74 - Tia Ann Pilaroscia, Lilian Teresa Antunes, Jonathan Jordan, "Riparian Fungal Population Dynamics along Buffalo Bayou as influenced by soil element composition and pH"

UHD Faculty Mentors: Dr. Phil Lyons and Dr. Shishen Xie Project Location: University of Houston-Downtown

76 - Shelya Randle and Cindy De Los Santos, "Inhibition of Dental Biofilms Using Commercial Mouthwashes"

Co-Authors: Evelyn Ooi, Karen Martinez

UHD Faculty Mentor: Dr. Poonam Gulati

Project Location: University of Houston-Downtown

78 - Eric Roberson, "Visual Rhetoric and the Ethics of LGBT Fair Marketing Practices"

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

80 - Kamran Safarli, "New Detection of Lithium Ion-based on Prussian Blue Film-based Sensors"

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

82 - Clinton Seay, "Motives for Facebook Use: A Confirmatory Factor Analysis'

UHD Faculty Mentor: Dr. Christine Bachman Project Location: University of Houston-Downtown

- 84 Kulsoom Kishwar Shah, "Using Recurrence to Derive a Formula for the Independence Number of Triangulenes"

UHD Faculty Mentor: Dr. Ryan Pepper

Project Location: University of Houston-Downtown

86 - Andrew Tran, "Fully Unsupervised Word Sense Disambiguation Using Dependency Knowledge on a Specific Domain"

UHD Faculty Mentor: Dr. Ping Chen

Project Location: University of Houston-Downtown

88 - Eric Alberto Uquillas Collazo, "Sensing Hydrogen Peroxide by Palladium Electrode'

UHD Faculty Mentor: Dr. Mian Jiang

Project Location: University of Houston-Downtown

90 - Karina Vazquez, "Constitutive Expression of Foxp3 in Conventional T cells Reduces Cellular Proliferation and Alleviates Autoimmune Arthritis"

Co-Authors: Dr. Lingie Guo and Zenxin Wang

Faculty Mentor: Dr. Shuhua Han Project Location: Baylor College of Medicine

92 - Tabitha Ward, Charles Ryan Jeffcoat, "Exhumation of Deep Crystal Amphibolite and their partial Metts: An Example from the Round Valley Pluton"

UHD Faculty Mentor: Dr. Kenneth Johnson

Project Location: University of Houston-Downtown 94 - Antoine Williams-Boisy, "Temporal Information Extraction"

UHD Faculty Mentor: Dr. Ping Chen

Project Location: University of Houston-Downtown

Acknowledgements

It is a great pleasure to recognize the many individuals, organizations, and institutions supporting our UHD students in their research endeavors. These include significant funding of research over the past year from the National Institute of General Medical Sciences (1T34GM079088), 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, Inc., 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 generously supported and mentored our UHD 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, Kenneth Oberhoff, Dennis Rodriguez, Edward Sheinberg, Larry Spears, Akif Uzman, Dean Susan Ahern, Dean Donald Bates, Dean Elizabeth Pelz, Dean George Pincus, and UHD President William Flores.

Thank you for participating in the 9th 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 **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

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