

Sponsored by the UHD Scholars Academy

Funded by the
National Institute of General Medical Sciences (1T34GM079088),
National Science Foundation (0728408),
The Brown Foundation, Inc., 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 15, 2011

8:00 - 9:00 am	Registration and Continental Breakfast, Coffee House
9:00 am	<i>Dr. Brian Chapman, Senior Vice President for Academic Affairs & Provost, University of Houston-Downtown</i> Welcoming Remarks, UHD Wilhelmina Cullen Robertson Auditorium
9:10 am	<i>Dr. Weining Feng, Associate Professor of Engineering Technology, UHD</i> Introduction of Keynote Speaker, Auditorium
9:10 - 9:40 am	<i>Dr. Obadiah Kegege, NASA Glen Research Center, 2002 UHD Alumnus</i> Keynote Speaker, Auditorium
9:40 - 10:40 am	Oral Presentations, Session I, Auditorium
10:50 - 11:50 pm	Oral Presentations, Session II, Auditorium Introductions by <i>Drs. Ken Johnson and Aimee Roundtree, SRC Co-Chairs</i>
11:50 am	<i>Johanna Wolfe, Vice President for Advancement and External Relations, UHD</i> Introduction of External Community Speaker, Auditorium
11:50 - 12:10 pm	<i>Mr. Patrick DeRueda, President, Waste Management, Inc.</i> External Community Speaker, Auditorium
12:10 - 1:30 pm	Lunch Break
1:30 - 3:30 pm	Open Poster Sessions, Room A300

Conference Co-Chairs:

Dr. Kenneth Johnson, Assistant Professor of Geology, UHD
Dr. Aimee Roundtree, Assistant Professor of English, UHD

Conference Planning Committee:

Dr. David Branham, Assistant Professor of Social Sciences, UHD
Dr. Youn-Sha Chan, Associate Professor of Mathematics, UHD
Dr. Weining Feng, Associate Professor of Engineering Technology, UHD
Mr. Rene Garcia, Program Manager, UHD Scholars Academy
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. Gene Preuss, Associate Professor of History, UHD
Dr. Ruth Robbins, Professor of Finance, Accounting and CIS, UHD
Dr. Larry Spears, Professor of Chemistry, UHD
Mrs. Mary Sykes, Lecturer of Finance, Accounting and CIS, UHD
Dr. Akif Uzman, Chair of Natural Sciences Department, UHD
Dr. Jeong-Mi Yoon, Associate Professor of Mathematics, UHD

Oral and Poster Presentations:

16 - Brandy Bell, "Migmatization and Melt Generation in the Monotonous Unit, Moldanubian Batholith, Czech Republic: Implications of Zircon Pb/U (SHRIMP-RG) Ages and Hf Isotope Compositions"
Co-Authors: **1Jiri Zak, 1Krystof Verner, and 2Joshua J. Schwartz. (1) Department of Geology, Charles University, Prague, Czech Republic, (2) Department of Geological Sciences, University of Alabama, Tuscaloosa, AL**
UHD Faculty Mentor: **Dr. Kenneth Johnson**
Project Location: University of Houston- Downtown

29 - Marlyn Davila, "Role Of Muscblind1 In Aberrant Splicing In Myotonic Dystrophy Type 2 (DM2)"
Co-Authors: **Linda L. Bachinski and Mario Siritto**
Faculty Mentor: **Dr. Ralf Krane**
Project Location: University of Texas M.D. Anderson Cancer Center

42 - Mitesh Koirala, Huralain Raja, "Investigations of Plasmid Sequences of Xylella fastidiosa Genomes from Texas"
UHD Faculty Mentor: **Dr. Lisa Morano**
Project Location: University of Houston- Downtown

48 - Sarah E. Mayer, "Personal Values as Motivators for Engaging in Women's Rights"
UHD Faculty Mentor: **Dr. Justin Hackett**
Project Location: University of Houston- Downtown

55 - Adetomiwa Oguntuga, "Ant Foraging Simulation Analyzer"
Faculty Mentor: **Dr. Melanie Moses**
Project Location: University of New Mexico

61 - Rodolfo Rios, Jr., "Residential Real Estate Property Tax Appeal In Harris County, Texas: An Empirical Analysis And Policy Recommendation"
UHD Faculty Mentor: **Dr. Chu Nguyen**
Project Location: University of Houston- Downtown

64 - Leah Scogin, "Parable of the Anti-Vendetta: Tracing the Themes of Hope and Future in Parable of the Sower and V for Vendetta"
UHD Faculty Mentor: **Dr. Nicole LaRose**
Project Location: University of Houston- Downtown

69 - Glenda L. Thammavongsa, Cori Ali, Lassana Samarakoon, "Using Diatoms and Arcellaceans to Determine Succession of a Mitigated Wetland"
UHD Faculty Mentor: **Dr. Brad Hoge**
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
Phone: 713-222-5344; Fax: 713-222-5356; scholars@uhd.edu; www.uhd.edu/scholars

41 - Jarret Kitchen, “Thermal Analysis of Dinuclear Cu(II) Complexes”

Co-Author: **Dr. Salah Massoud, University of Louisiana-Lafayette**

UHD Faculty Mentor: **Dr. Janusz Grebowicz**

Project Location: University of Houston- Downtown

43 - Johnathan Kuskos, Denise Montes, Manuel Palma, “A Program for Brain State Analysis”

Co-Authors: **Kaleigh Ceaser, Ilian Rojas**

UHD Faculty Mentor: **Dr. Hong Lin**

Project Location: University of Houston- Downtown

45 - Binh Le, “Sex Ratio of Millipedes”

UHD Faculty Mentor: **Dr. Barry Sullender**

Project Location: University of Houston- Downtown

47 - Lisa Jane Matsell, “Thermal Properties of Granites as Geological Materials for Repository of Nuclear Waste”

Co-Author: **Dr. Krystof Verner, Czech Geological Survey**

UHD Faculty Mentor: **Dr. Janusz Grebowicz**

Project Location: University of Houston- Downtown

49 - Sarah E. Mayer, “The Role of Parental Hostility in Parental Perception of Non-Parental Discipline”

UHD Faculty Mentor: **Dr. Susan Henney**

Project Location: University of Houston- Downtown

51 - Sasha Meyer, “The Importance of Gender Responsive Strategies for Female Offenders: Pathways Theory of Female Criminality”

UHD Faculty Mentor: **Dr. Tomson Nguyen**

Project Location: University of Houston- Downtown

53 - James Allen Nealy, Jr., “Missed Opportunities: LBJ, the Sino-Soviet Split and the Prague Spring”

UHD Faculty Mentor: **Dr. Gene Preuss**

Project Location: University of Houston- Downtown

55 - Adetomiwa Oguntuga, “Ant Foraging Simulation Analyzer”

Faculty Mentor: **Dr. Melanie Moses**

Project Location: University of New Mexico

57 - Ada Ashley Otti, Mayra Rios, and Viridiana Sanchez, “Categorization of Facial Stimuli by Gender and Race”

Co-Authors: **Angel Harrison and Natalie Trevino**

UHD Faculty Mentors: **Drs. Stephanie J. Babb, Ruth M. Johnson, and Mary Portillo**

Project Location: University of Houston- Downtown

59 - Amanda Polidore, Natalie Robbins, and Shannon Peterson, “The Role Society and Media Play in the Development of an Eating Disorder”

UHD Faculty Mentor: **Dr. Christine Bachman**

Project Location: University of Houston- Downtown

61 - Rodolfo Rios, Jr., “Residential Real Estate Property Tax Appeal In Harris County, Texas: An Empirical Analysis And Policy Recommendation”

UHD Faculty Mentor: **Dr. Chu Nguyen**

Project Location: University of Houston- Downtown

63 - Kayleigh Michelle Rundquist, “Avoiding Extinction: Processes to Reconstruct Judea-Spanish”

UHD Faculty Mentor: **Dr. Reynaldo Romero**

Project Location: University of Houston- Downtown

65 - Israel Sierra, “Electrochemical Sensing Of Sulfur-Containing Organic Compounds By Electrodes Of Non-Noble Metals”

Co-Authors: **Yongjie Zhan and Jun Lou, Department of Mechanical Engineering and Material Science, Rice University**

UHD Faculty Mentors: **Drs. Mian Jiang and Larry Spears**

Project Location: University of Houston- Downtown

67 - David Spilkin, Oliver Sudduth, “The Growth of Megacities; the Case study of Dhaka, Bangladesh”

UHD Faculty Mentor: **Drs. Merrilee Cunningham**

Project Location: University of Houston- Downtown

69 - Glenda L. Thammavongsa, Cori Ali, Lassana Samarakoon, “Using Diatoms and Arcellaceans to Determine Succession of a Mitigated Wetland”

UHD Faculty Mentor: **Dr. Brad Hoge**

Project Location: University of Houston- Downtown

71 - Santa Vasquez and Sudeep Wosti, “FM Transmitter Circuit”

UHD Faculty Mentor: **Dr. Weining Feng**

Project Location: University of Houston- Downtown

73 - Anna A. Weekes, “Engagement in Community Service: Does Commuting and Psychological Sense of Community Make a Difference for Students?”

UHD Faculty Mentor: **Dr. Justin Hackett**

Project Location: University of Houston- Downtown

75 - Elena Espino, “MRI Analysis of Superficial Femoral Veins in Patients with Peripheral Arterial Disease”

Co-Author: **Eric Yang, M.D.**

Faculty Mentor: **Dr. Joel D. Morrisett**

Project Location: Baylor College of Medicine

77 - A'Tondra Gilstrap, “Viability of Enteric Bacterial Pathogens in Transport Media Systems”

Co-Author: **Jeticia Sistrunk**

Faculty Mentor: **Dr. Zhi-Dong Jiang**

Project Location: Center for Infectious Diseases at University of Texas School of Public Health

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

2 - Tolani Abiola, Dawn Keys, “Observer Gender and Ethnic Differences in Attributions of Blame and Responsibility for Violent Females”

Faculty Mentors: **Drs. Cindy Stewart 1, Todd Moore 2, Travis Crone 1, Stacie De Freitas 1**

Project Location: 1 University of Houston- Downtown; 2 University of Tennessee-Knoxville

4 - Amir Aghajani, Trina Alaniz, Felipe Arreola, “Design and Construction of a Lightweight Reinforced Concrete T Beam”

UHD Faculty Mentor: **Dr. Jorge Tito-Izquierdo**

Project Location: University of Houston- Downtown

6 - Debrah Alsobrook, Melanie Boudreaux, “When Can Strangers Intervene: An In Depth Look at Non-Parental Discipline, Child Characteristics, and Parental Attitudes”

UHD Faculty Mentor: **Dr. Susan Henney**

Project Location: University of Houston- Downtown

8 - Fernando Andrade, “Identification of Laccase Genes from Coastal Prairie Soil Ascomycete Fungi”

Co-Authors: **Jessica Collins and Amrit Lamichhane**

UHD Faculty Mentor: **Dr. Phil Lyons**

Project Location: University of Houston- Downtown

10 - Felipe Arreola, Amir Aghajani, Trina Alaniz, “A Correlation of Hydration Temperature to Concrete Compressive Strength”

UHD Faculty Mentor: **Dr. Jorge Tito-Izquierdo**

Project Location: University of Houston- Downtown

12 - Nameera Baig and David Tran, “New pH Sensor Based on Ionomer/Carbon Nanoparticle Composite Film: Extension of Detection into the Very Strong Acidic Environment”

UHD Faculty Mentor: **Dr. Mian Jiang**

Project Location: University of Houston- Downtown

14 - Jesus Barron-Aldana, “Co-factor Manipulation Increases Stress Tolerance in Escherichia coli”

Co-Authors: **Drs. G. Blazer, G. Bennett, K.Y. San**

Faculty Mentor: **Dr. Grant Blazer**

Project Location: Rice University

16 - Brandy Bell, “Migmatization and Melt Generation in the Monotonous Unit, Moldanubian Batholith, Czech Republic: Implications of Zircon Pb/U (SHRIMP-RG) Ages and Hf Isotope Compositions”

Co-Authors: **1Jiri Zak, 1Krystof Verner, and 2Joshua J. Schwartz. (1) Department of Geology, Charles University, Prague, Czech Republic, (2) Department of Geological Sciences, University of Alabama, Tuscaloosa, AL**

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

Project Location: University of Houston- Downtown

18 - Flor Botello, Anastacia Bynoe, Tonya Ditsler, “How Large is My Megalopolis?”

UHD Faculty Mentor: **Drs. Crystal Guillory and Merrilee Cunningham**

Project Location: University of Houston- Downtown

20 - Amber Meghan Burkett, Russel Kendrick, Mayra Sanchez,

“Mathematical Analysis of Biofilm Growth of Pseudomonas aeruginosa and Mycobacterium smegmatis”

UHD Faculty Mentors: **Drs. Youn-Sha Chan and Poonam Gulati**

Project Location: University of Houston- Downtown

- 22 - Debbie Bush**, “Population Genetics and Management of Suburban White-Tailed Deer (*Odocoileus virginianus*)”
Co-Authors: **Mark Weckell and Mark Siddall2 - 1Mianus River Gorge Preserve, Bedford, NY; 2American Museum of Natural History, New York, NY**
UHD Faculty Mentor: **Dr. Akif Uzman**
Project Location: University of Houston- Downtown
- 24 - Jennifer Carmichael and Daisy Silva**, “Viscosity Reduction of Bisphenol-A Based Epoxy Diacrylate Oligomer Using Aqueous Solutions of Electrolytes”
UHD Faculty Mentor: **Dr. Byron Christmas**
Project Location: University of Houston- Downtown
- 26 - Raymond Cherian, Jermaine Thomas, Joanne Veloz, Alexis Woodard**, “The Effectiveness of Artificial Organs vs. Natural Organs”
Co-Authors: **Shawn Benny, Angela Lee, and Arturo Garza**
UHD Faculty Mentor: **Mitsue Nakamura**
Project Location: University of Houston- Downtown
- 28 - Daniel Cowart**, “An Investigation of Regret Type and Directionality Within the Context of Life-Satisfaction”
UHD Faculty Mentor: **Dr. Derek de la Pena**
Project Location: University of Houston- Downtown
- 30 - Randy Davila**, “Synthesis and Characterization of Novel Catanionic Amphiphiles”
Co-Authors: **Dr. Pradip. K. Bhowmik, Department of Chemistry, University of Nevada Las Vegas**
UHD Faculty Mentors: **Drs. Janusz Grebowicz and Robin Jose**
Project Location: University of Houston- Downtown
- 32 - Edgar Figueroa, Joseph Alvarado, Taiwo Rahman**, “Heat Integrated Distillation for Ternary Separations”
UHD Faculty Mentor: **Dr. Vassilios Tzouanas**
Project Location: University of Houston- Downtown
- 34 - Ruslan Gashinov**, “Computational Studies of Novel Ion Pair Amphiphiles (IPA)”
UHD Faculty Mentors: **Drs. Robin Jose and Maria Benavides**
Project Location: University of Houston- Downtown
- 36 - Marco Hernandez, Wendy Ramirez, Sheba Mathew**, “An Insight into the Ebola Virus”
Co-Authors: **Caroline Barbosa, Joanna Castañeda, Arrion Goudeau, Lili Perez**
UHD Faculty Mentor: **Mitsue Nakamura**
Project Location: University of Houston- Downtown
- 38 - Anderson Jackson III and Lisa Camp**, “Group Knowledge: Comparison of Diversity within Student Teams”
UHD Faculty Mentor: **Dr. Faiza Khoja**
Project Location: University of Houston- Downtown
- 40 - Hina Khan, Nathalie Mikeska, and Monica Reyes**, “Functional Analysis of Episodic Memory Using a What-Where-When Design”
Co-Authors: **Meredith Carey and Logan Lynn**
UHD Faculty Mentors: **Drs. Stephanie J. Babb and Ruth M. Johnson**
Project Location: University of Houston- Downtown
- 42 - Mitesh Koirala, Huralain Raja**, “Investigations of Plasmid Sequences of *Xylella fastidiosa* Genomes from Texas”
UHD Faculty Mentor: **Dr. Lisa Morano**
Project Location: University of Houston- Downtown
- 44 - Adolfo Lara**, “Determining The Role Of Syntaxin 4 By Using Patch-Clamping To Measure Capacitance Changes In Mice Wild Type And Knock-Out Mast Cells”
Co-Author: **Brittany L. Coughlin**
Faculty Mentor: **Dr. Ruth Heidelberger**
Project Location: University of Texas Health Science Center Houston
- 46 - Diana Lopez**, “What About The Brady Bunch? The Effect Of Family Size And Income On Support For Vouchers”
UHD Faculty Mentor: **Dr. David Branham**
Project Location: University of Houston- Downtown
- 48 - Sarah E. Mayer**, “Personal Values as Motivators for Engaging in Women’s Rights”
UHD Faculty Mentor: **Dr. Justin Hackett**
Project Location: University of Houston- Downtown
- 50 - Dean Russell Mertens, Brian Wallace Frey**, “Spinning Ball Spiral”
UHD Faculty Mentor: **Dr. Jorge Tito-Izquierdo**
Project Location: University of Houston- Downtown
- 52 - Charles Morehead**, “Partisanship, Race, and Solutions for Academic Inadequacy in Public Schools”
UHD Faculty Mentor: **Dr. David Branham**
Project Location: University of Houston- Downtown
- 54 - Tuan Nguyen, Sara Wilder**, “Mathematical Modeling of the Glassy-Winged Sharpshooter Population in Texas Vineyards”
UHD Faculty Mentors: **Drs. Jeong-Mi Yoon, Volodymyr Hrynkiw, Lisa Morano**
Project Location: University of Houston- Downtown
- 56 - Matthew Ojeda, Deepak Pandey**, “The newest *Xylella fastidiosa* genome from Texas: Preliminary Analysis of ‘Oak Strain’ MM067”
UHD Faculty Mentor: **Dr. Lisa Morano**
Project Location: University of Houston- Downtown
- 58 - Tia Pilaroscia and Lilian Antunes**, “Riparian Fungal Population Dynamics along Buffalo Bayou as influenced by soil element composition and pH”
UHD Faculty Mentors: **Drs. Phil Lyons and Shishen Xie**
Project Location: University of Houston- Downtown
- 60 - Raquel Ramos**, “Ethnic Differences in Attitudes Toward Non-Parental Discipline”
UHD Faculty Mentor: **Dr. Susan Henney**
Project Location: University of Houston- Downtown
- 62 - Elda Rueda and Valerie Jordan**, “Immunohistochemical Profiling of Creatine Kinase and Adenylate kinase in Adult Mouse Retina: Implications in Retinal Metabolism”
Co-Author: **Irena Sigel**
UHD Faculty Mentor: **Dr. Jerry Johnson**
Project Location: University of Houston- Downtown
- 64 - Leah Scogin**, “Parable of the Anti-Vendetta: Tracing the Themes of Hope and Future in Parable of the Sower and V for Vendetta”
UHD Faculty Mentor: **Dr. Nicole LaRose**
Project Location: University of Houston- Downtown
- 66 - Ceraira Snerling Simmons**, “Isolation of Potential Antiviral Agents from Plant Products”
Co-Authors: **Dr. Hamida Qavi and Jose Ventura**
UHD Faculty Mentor: **Dr. Tyra Montgomery**
Project Location: University of Houston- Downtown
- 68 - Marika Stepankiw**, “Qualitative Analysis of the Figurative Language in Crisis Social Media Campaigns: Preliminary Findings”
UHD Faculty Mentor: **Dr. Aimee Roundtree**
Project Location: University of Houston- Downtown
- 70 - Jose Trinidad**, “Singular Shocks and Hyperbolic Conservation Laws”
UHD Faculty Mentor: **Dr. Katarina Jegdic**
Project Location: University of Houston- Downtown
- 72 - Monica Villegas, Nadia Abousaoui**, “Aliphatic Acrylate-Functional Urethane Optimization and Comparison”
Co-Author: **Omid Afhami**
UHD Faculty Mentor: **Dr. Byron Christmas**
Project Location: University of Houston- Downtown
- 74 - Desiree Wilson**, “MicroRNA-96 Is A Posttranscriptional Suppressor Of Anaplastic Lymphoma Kinase Expression In T-Cell Lymphoma And Other Cancers”
Co-Authors: **Yong Li, Deeksha Vishwamitra, Bin Shi, Ping Shi, and Hesham Amin**
Faculty Mentor: **Dr. Hesham Amin**
Project Location: University of Texas M.D. Anderson Cancer Center
- 76 - Laura R. Hardin, Allen Fok, Vision Prashasuouk**, “When Good People Go Bad: Identifying Personality Red Flags of Fraudsters”
UHD Faculty Mentor: **Dr. Linda Bressler**
Project Location: University of Houston- Downtown

External Community Speaker:

Patrick DeRueda

President, Waste Management, Inc.

Patrick DeRueda is President of Waste Management's Recycle America, a wholly owned subsidiary of the company. Waste Management, Inc., based in Houston, Texas, is a FORTUNE 200 company with revenues of approximately \$12 billion and 43,000 employees. Mr. DeRueda is responsible for all aspects of the company's recycling activities including processing, commodity marketing and applying practical technology. Pat has been with Waste Management in various positions since 2001. He served as a Market Area General Manager in the west, where he oversaw various business operations in New Mexico and Arizona.

Before joining the Waste Management team, Mr. DeRueda was employed by BFI Waste Systems from 1987 to 2001 where he managed that company's safety program and served as district manager in Santa Barbara, CA. In 2000, Pat served as president of the board of directors for the Santa Barbara Region Chamber of Commerce. He also served as the 1996 Hispanic Business Council Chairperson and has served board of directors for the Business First National Bank of Santa Barbara (founder) and the Rio Rancho Chamber of Commerce. Mr. DeRueda received his bachelor's degree and a certificate in health and safety studies from California State University in Los Angeles.



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

1 - Gloria Abarca, Sueyen Diosdado, "Temporal Changes in Bacterial Endophyte Communities in European and American Hybrid Grapevines"
UHD Faculty Mentors: **Drs. Jeong-Mi Yoon, Volodymyr Hrynkiv, Lisa Morano**

Project Location: University of Houston- Downtown

3 - Frances Acevedo, "Novel and Stereotypical Age-Related Changes in Retinal Synaptic Structure: Implications for Age-Related Vision Loss"

Co-Authors: **Elda Rueda, Michael Irving, Shajeer Noorudeen, Donald Fox**
UHD Faculty Mentor: **Dr. Jerry Johnson**

Project Location: University of Houston- Downtown

5 - Amie Albanese, Robert Nguyen, Jose Trejo, "Mathematical Modeling of the BMP-4 and FGF Signaling Pathways during Neural Induction in *Xenopus laevis*"

UHD Faculty Mentors: **Drs. Edwin Tecarro and Akif Uzman**

Project Location: University of Houston- Downtown

7 - Rachael Aminu, "The Influence of Gender and Birth Country on the Value of Education in the Latino Community"

UHD Faculty Mentor: **Dr. David Branham**

Project Location: University of Houston- Downtown

9 - Felipe Arreola, Luis Hernandez, "Pile Performance"

UHD Faculty Mentor: **Dr. Jorge Tito-Izquierdo**

Project Location: University of Houston- Downtown

11 - Nameera Fatima Baig, "A Study of the Oligomer CN996"

UHD Faculty Mentor: **Dr. Byron Christmas**

Project Location: University of Houston- Downtown

13 - Rebecca Barbosa, Itzel Campos, Jordan Cline, "Adrenoleukodystrophy (ALD) and The Myelin Project"

Co-Authors: **Curtis Bickman, David Duran, Anisa Saleh**

UHD Faculty Mentor: **Mitsue Nakamura**

Project Location: University of Houston- Downtown

15 - Tonya Bauch and Jillian Morin, "Analysis of phage particles found in newly sequenced *Xylella fastidiosa* genome, Med Mts 067"

UHD Faculty Mentor: **Dr. Lisa Morano**

Project Location: University of Houston- Downtown

17 - Kelsey Dawn Bogaards, "Examining The Order Effect Of Nonconscious Priming For Goal-Related Behavior"

UHD Faculty Mentor: **Dr. Travis Crone**

Project Location: University of Houston- Downtown

19 - Robert Bowen, Ashley Davis, Amy Durden, Shterion Petrov, Michelle Pineda, "The Vertical City: Modern Urban Dwellers Find a Place in the Sky to Call Home"

UHD Faculty Mentors: **Drs. Crystal Guillory and Merrilee Cunningham**

Project Location: University of Houston- Downtown

21 - Amber Meghan Burkett, Mayra Sanchez, Onsiri Tapsavn, "Mathematical Modeling of *Pseudomonas aeruginosa* Biofilm Growth"

UHD Faculty Mentors: **Drs. Youn-Sha Chan and Poonam Gulati**

Project Location: University of Houston- Downtown

23 - Rogelio Camacho, Theodore Savage, "Thermal Properties of Oil Shales"

UHD Faculty Mentors: **Drs. Glen Merrill and Janusz Grebowicz**

Project Location: University of Houston- Downtown

25 - Diana Chakkramakkil, "Inhibition of Dental Biofilms of *Streptococcus mutans* by Active Ingredients in Mouthwashes"

Co-Author: **Laura Robles**

UHD Faculty Mentor: **Dr. Poonam Gulati**

Project Location: University of Houston- Downtown

27 - Maja Cicic, Kourtnei Jones, and Delia Phillips, "Consolidation of Memories in a What-Where-When Task"

Co-Authors: **Brenda Banda, Kimberly Lockett, and Adelita Suarez**

UHD Faculty Mentors: **Drs. Stephanie J. Babb and Ruth M. Johnson**

Project Location: University of Houston- Downtown

29 - Marlyn Davila, "Role Of Muscleblind1 In Aberrant Splicing In Myotonic Dystrophy Type 2 (DM2)"

Co-Authors: **Linda L. Bachinski and Mario Sirito**

Faculty Mentor: **Dr. Ralf Krahe**

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

31 - Reihana Elsayed, Kimberlyn Garcia, Isaac Valdez, "The Process of Card Counting and its Risks (Movie 21)"

Co-Authors: **Christopher Charles, Alex Jimenez, Jorge Pereira, Jesus Fernandez and Victor Martinez**

UHD Faculty Mentor: **Mitsue Nakamura**

Project Location: University of Houston- Downtown

33 - Cassandra Flores, "Study Of Acetaminophen and Transition Metals and their Analytical Applications"

UHD Faculty Mentors: **Drs. Mian Jiang and Larry Spears**

Project Location: University of Houston- Downtown

35 - Duber Gomez-Fonseca, Hooman Hemmati, and Sarah Jennisca, "Specialized Data Analysis, Aggregation & Visualization Tool Packages for R"

Co-Authors: **Lilian Antunes and Tia Pilaroscia**

UHD Faculty Mentors: **Drs. Richard Alo and Erin Hodgess**

Project Location: University of Houston- Downtown

37 - Wayland Hickman and Corey Davis, "Process Control of an Air Heater: An Experimental Study"

UHD Faculty Mentor: **Dr. Vassilios Tzouanas**

Project Location: University of Houston- Downtown

39 - Larry Kegler, Kartlik Gopavaram, Manuel Moreno, "Transportation in Current and Future Megacities"

UHD Faculty Mentor: **Dr. Merrilee Cunningham**

Project Location: University of Houston- Downtown

UHD Student Research Conference: Keynote Address

Obadiah Kegege, PhD

Electronics Engineer

Systems Engineering and Analysis Division
NASA Glenn Research Center

9:00 a.m. - Friday, April 15, 2011
Wilhelmina Cullen Robertson Auditorium
University of Houston-Downtown

Title: “Lessons Learned: How Your Undergraduate Research Can Open Opportunities for You”



Abstract: Nine years ago, I was part of the University of Houston-Downtown (UHD) Scholars Academy and actively participated in research and presented in the Annual UHD Student Research Conference. This research experience opened doors to my graduate education, a PhD, and later to a professional career with NASA. The hope for a brighter future lies in our research efforts and innovations that make positive impacts in society. Because of others who were/are willing to persistently spend their time on research, we enjoy new technologies, such as life changing medical diagnostics equipment and advanced scientific/computing and modeling devices, security systems, wireless communication, and entertainment systems. As an undergraduate student at UHD, your success in research will create a link to your graduate education and employers. I will share my experiences with you – future scientists, doctors, entrepreneurs, engineers, and innovators. My presentation will entail lessons learned as an undergraduate, participant in research, preparation for graduate school, and transition to the workforce. Together, we will answer these two questions: “Is undergraduate research a vital factor in your education and career development?” and “How does your involvement in research and presentations benefit you as a student?”

Biography: Dr. Obadiah Kegege is an Electronics Engineer in the Systems Engineering and Analysis Division at NASA Glenn Research Center. He is currently part of the Space Communications and Navigation team. Obadiah received his Bachelor of Science in Control and Instrumentation Electronics Design (Summa Cum Laude) from the University of Houston-Downtown in 2002 as a Scholars Academy member. He later earned his Master’s of Science in Electrical Engineering in 2006 from the University of Texas Pan American (Thesis: Ultra-Wide Band Radar for Near-Surface and Buried Target Detection) and a PhD in 2009 from the University of Arkansas (Dissertation: Design and Verification of Integrated Reconfigurable Driver and Current Sensor for Extreme Space Environments). His experiences include performing electrical and instrumentation systems design, development, and testing in the petrochemical refineries and manufacturing plants. During his undergraduate and graduate studies, Dr. Kegege volunteered in a number of educational events, including the “Walk for Success” - an educational effort that utilizes thousands of volunteers conducting door-to-door campaign providing information to families with high school students about college readiness, expectations, and scholarship information. And now, as an engineer at NASA, Dr. Kegege volunteers to inspire and create an environment that supports student success in Science, Technology, Engineering, and Mathematics (STEM). He serves as a volunteer for the MC2STEM High School Program (supported by NASA Glenn Research Center) that provides high school students with project-based learning environments. In this capacity, Dr. Kegege participates in classroom group projects, evaluating student projects, and serving as a mentor. Plus, Dr. Kegege is a volunteer for the FIRST Robotics Competitions that combines the excitement of sports with challenging science and real-world engineering skills.

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 UBM Program (0734294), National Science Foundation S-STEM Program (0728408), The Brown Foundation, Inc., Welch Foundation (BJ-0027), NASA, Shell Oil Co. and University of Houston-Downtown.

Many students conducted their research during summer research programs on and off-campus. Faculty and staff members of these and other academic institutions, as well as personnel at industrial facilities, have generously supported/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. 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 10th 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)

National Science Foundation (Award No. 0728408)

UHD College of Business

UHD College of Humanities and Social Sciences

UHD College of Public Service

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