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).

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The 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)
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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, UHD
Dr. Lisa Moran, Associate Professor of Biology, Professor of Ornithology, UHD
Dr. Kenneth Oberhoff, Associate 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:

UHD Faculty Mentors: Drs. Lisa Moran 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-Author: Izabella Bobowska, Piotr Wojciechowski
UHD Faculty Mentors: Drs. Mian Jiang and Larry Spears
Project Location: Lodz, Poland

UHD Faculty Mentor: Dr. Darshan Wadhwa
Project Location: University of Houston-Downtown

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

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 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 Linantudt
Project Location: University of Houston-Downtown

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 Polymesters”
UHD Faculty Mentor: Dr. Byron Christmas
Project Location: University of Houston-Downtown

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

UHD Faculty Mentor: Dr. Tyra Montgomery
Project Location: University of Houston-Downtown

19 - Isishelet 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 Bilow, Eva Marie Ferretzi, 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

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 Crystaline Arrays Created by Chemical Bath Deposition”
Co-Authors: Izabella Bobowska, Piotr Wojciechowski
UHD Faculty Mentors: Drs. Mian Jiang and Larry Spears
Project Location: Łódź, Poland

29 - Preeti Choudhary, “Novel Application 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 - Marilyn 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

UHD Faculty Mentor: Dr. Weining Feng
Project Location: University of Houston-Downtown

39 - Carrie Edwards, Efego 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 Linantudt
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 - Andrey 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, Cerraira 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 Vargheese, “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 Mehmoord, “Computational Studies of 1-Butyl-n-Methylpyridinium Tetrafluoroborate Ionic Liquids”
UHD Faculty Mentor: Dr. Maria Benavides
Project Location: University of Houston-Downtown

67 - Oyemem Omosto, “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

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

73 - Kelly Philips 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 Linantutd
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, Bruno Luís, 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

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 Electrocatlysis”
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 Adegbemena 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, 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 Ashton Ayazi, “Producing New High Speed Dispersion Techniques”
UHD Faculty Mentor: Dr. Byron Christmas
Project Location: University of Houston-Downtown

14 - Nameera Fatima Baj, “Exploration of Anchoring Techniques for Fabricating Effective Sensors”
Co-Author: Tomasz Mazalek, Technical University of Łódz, 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 Fosli
Project Location: University of Houston-Downtown

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

20 - Ashley Bihrey, “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

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

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
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.

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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:

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