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Welcome Message

UDC Research Week 2026

As we gather for Research Week 2026 — and as the University of the District of Columbia celebrates 175 years of service — we have an opportunity to reflect on the role of research in advancing knowledge, strengthening communities and building a sustainable foundation for the future. Grounded in our public land-grant mission, this work is shaped by the needs and opportunities of the urban environment we are proud to serve — and by a shared commitment to inspiration, innovation and impact.

At UDC, our research enterprise is interdisciplinary, applied and deeply connected to the community. Faculty, students and partners are exploring areas such as artificial intelligence, additive manufacturing, data science, emerging technologies and business development to address timely challenges in health, sustainability, economic opportunity and more. Across disciplines, there is a shared commitment to ensuring that discovery leads to practical, real-world outcomes.

Research Week offers both a moment of reflection and a look ahead. It brings together the ideas, partnerships and sense of purpose that define scholarship at UDC, while highlighting the students and emerging scholars who will carry this work forward.

Thank you to our faculty, students, staff and partners for contributing to a culture of inquiry that advances knowledge and supports the communities we serve.

Sincerely,
Pradeep Behera, PhD
Interim Manager of the Office of University Research

UDC Internal Research Council Members

The Internal Research Council plays an instrumental role in spearheading research activities, policies and goals to align with the president's strategic plan for the university. Members lead and organize Research Week to strengthen UDC's research visibility and to elevate UDC as a research institution.

Amit Arora, PhD, is a professor in the School of Business and Public Administration.

Pradeep Behera, PhD, PE, FASCE is an associate dean of research in the School of Engineering and Applied Sciences and interim manager of the Office of University Research.

Anna Franz, PhD, is associate dean in the College of Agriculture, Urban Sustainability and Environmental Sciences.

Catherine Meals, MLIS, is an associate professor and the reference and assessment librarian in the Learning Resources Division.

Esther Ososanya, PhD, is a professor in the School of Engineering and Applied Sciences.

Yvette Pappoe, JD, is an associate professor in the David A. Clarke School of Law.

Malva Reid, PhD, is director of graduate education in the Office of Graduate Education.

Bushra Ahmad Saeed, PhD, is associate dean at UDC Community College.

Dhymy Z. Vixamar-Owens, PhD, is an associate professor in the College of Arts and Sciences.

Eileen N. Vo, PhD, is a research officer in the Office of University Research

Research Week Schedule

April 6, 2026

Opening Remarks: Celebrating 175 Years of Inspiration, Innovation and Impact

9 – 10:30 a.m.

Student Center, Heritage Hall, Van Ness Campus

College of Arts and Sciences and the School of Education and Learning Sciences

10:30 a.m. – 4 p.m.

Building 71, 4th Floor, Atrium, Van Ness Campus

School of Business and Public Administration

1 – 4 p.m.

Building 38, 2nd Floor, Windows Lounge, Van Ness Campus

April 7, 2026

Interdisciplinary Research

8.45 a.m. – Noon

Auditorium, Lamond-Riggs Campus

David A. Clarke School of Law

Noon – 2 p.m.

Building 52, 5th Floor, Moot Courtroom, Van Ness Campus

UDC Community College

1 – 4:45 p.m.

Auditorium, Lamond-Riggs Campus

April 8, 2026

Interdisciplinary Research Day

9 a.m. – 5 p.m.

Student Center, Ballroom, Van Ness Campus

April 9, 2026

Interdisciplinary Research

8:45 a.m. – Noon

Student Center, Ballroom, Van Ness Campus

School of Engineering and Applied Sciences

10 a.m. – 4 p.m.

Student Center, Ballroom, Van Ness Campus

April 10, 2026

College of Agriculture, Urban Sustainability and Environmental Sciences

Noon – 7 p.m.

Student Center, Heritage Hall, Van Ness Campus

Water Symposium - Registration required

8:45 a.m. – 6 p.m.

Student Center, Ballroom, Van Ness Campus

APRIL 6, 2026

Opening Session

9 – 10:30 a.m.

Student Center, Heritage Hall, Van Ness Campus

Continental breakfast will begin at 8:45 a.m.

Opening Remarks:

9 – 9:10 a.m.: President Maurice D. Edington, PhD

9:10 – 9:20 a.m.: Chief Academic Officer April Massey, PhD

9:20 – 10:30 a.m.: **Panel Discussion: Celebrating 175 Years of Inspiration, Innovation and Impact**

- Amit Arora, PhD, and Anshu Arora, PhD, School of Business and Public Administration
- Bushra Saeed, PhD, and Michael Ha, PhD, UDC Community College
- Ashley Daniels, PhD, College of Arts and Sciences and School of Education and Learning Sciences

- Yolandra Plummer, PhD, College of Agriculture, Urban Sustainability and Environmental Sciences
- JiaJun Xu, PhD, and Pawan Tyagi, PhD, School of Engineering and Applied Sciences
- Vanita “Saleema” Snow, JD, David A. Clarke School of Law
- Meghan Kowalski, MSLS, Learning Research Division/Library
- Moderator: Malva Reid, PhD, Office of Graduate Education

College of Arts and Sciences and School of Education and Learning Sciences

10:30 a.m. – 4 p.m.

Building 71, 4th Floor, Atrium, Van Ness Campus

10:30 – 10:50 a.m.: Opening Plenary

11 a.m. – Noon: Concurrent Interactive Workshops

Basic History of Sexual & Gender Minority Policy and How to Become a Better Ally to LGBTQIA+ Youth, Samm L. Powell (Faculty Mentor: Angela Henderson, PhD)

Bridging the Gap: Utilizing Artificial Intelligence Build Background Knowledge in Kindergarten Science Literacy, Meseret Abebe, Tursonya Brown, Yadni Ma, Veronica Ocariza, and Awa Traore (Faculty Mentor: Ayanna Kelley, PhD)

Cognitive Vitality Workshop: Supporting Healthy Aging and Brain Health, Tiffany C. Gurley Nettles, PhD, Elisha Purvis, and LaRita Monagan

Intersections and Interdisciplinary Building: An Autoethnographic Case Study Exploring UDC's MSW Program, Kesslyn Brade Stennis, PhD, Angela Henderson, PhD, Joyce Roberson-Steele, PhD, and Patricia Galan-Cisneros, PhD

Literacy Skills in Understanding World Problems for 2nd Grade Math, Emmet Johnson, Elijah Crawford and Fatma Mzee (Faculty Mentor: Ayanna Kelly, PhD)

Reclaiming Attention: Collaborative Practices for Human-Centered Learning, Amanda Huron, PhD (Lead facilitator),¹ Michelle Chatman, PhD (Co-facilitator),² Kit Patterson, MEd,³ Elizabeth Gearin, PhD,⁴ Helene Krauthamer, PhD,⁵ and Jennifer Sparkman Bartee, PhD⁶

11 a.m. – Noon: Concurrent Spark Talks/Round Tables

Health Promoting Behaviors, Sofiiia Shaparenko (Professor: Dhymsey Vixamar-Owens, PhD)

Integrating Socialization and Self-Efficacy in the Application of Artificial Intelligence, Kelli A. Hill, PhD,¹ and Kahlil Green, PhD, LMSW²

Out of the Lab and Into the Community, Alisa Gogarty, Kailah Matthews (Faculty Mentor: Toni Walters, MS)

Queering Institutional Memory: LGBTQ+ Counter-Narratives at UDC, Anthony Manning (Faculty Advisor: Anika Burtin, PhD)

Stress and Burnout in College Athletes, Sacoyia Todd (Professor: Dhymsey Vixamar-Owens, PhD)

Title IX Solution or Problem - If Not Now, When?, Elizabeth M. Jordan (Faculty Mentor: Joseph C. Lang, MA)

12:10 – 2:30 p.m.: Concurrent Oral Presentations

A Steiner-Limit Approach to Numerical Evaluation of Elliptic Integrals and Elliptic Functions, Abdollah Darai, PhD

Adverbial and Language Choices That Support Emotional Insight, Connection, and Growth in Therapeutic Settings, Kennya Williams (Professor: Helene Krauthamer, PhD)

Amplifying Pedagogical Wisdom Through Artificial Intelligence in Culturally and Linguistically Responsive CLR Teaching, Eulises Avellaneda, PhD

Approximation Formula of the Perimeter of an Ellipse, Claude Mounet and M. Mounet (Faculty Mentor: Abdollah Darai, PhD)

Beyond the Essay: Student Poetry and Zines as Evidence of Learning in Social Work Education, Elizabeth Allen, PhD, Lia Richard-Palmiter, PhD, Sangam Alopeke, Aliyah Bailey, Aviyana Green, and Sophia Grosser

Cross Curriculum Math Literacy Supplemental Learning Tool for Diverse Learners, Hajjah Muhammad (Faculty Mentor: Arlene King-Berry, PhD)

Disruptive Pedagogies, Transformative Futures: Black Women Reshaping Political Science, Ashley C.J. Daniels, PhD, Monique A. Gamble, PhD, Shiela Harmon Martin, PhD, and Jasmine Noelle Yarish, PhD (Facilitator)

Education Majors Conduct Archival Research into UDC's History, Meseret Abebe, Tursonya Brown, Elijah Crawford, Georgina Jacobo, Emmett Johnson, Yadni Ocariza, Ravija Ranasinghe, Awa Traore, Jennifer Sparkman Bartee, PhD (Lead facilitator), Christopher Anglim, JD (Co-facilitator)

Electrochemical Characterization of Sulfonated Cobalt Porphyrin Complex in Aqueous Media Using Three Electrode Setup, Gavin Seiden, Bushra Bari, PhD, and Uche Udeochu, PhD

Experiences of Middle School Speech-language Pathologists in Selecting and Implementing Literacy-Based Programs, Toni Walters, MS

Global Travel Patterns and Economic Impact, Golden Davis (Research Mentor: Kelli Hill, PhD)

How Does Disability Law Shape Inclusion Decisions for Special Education Students?, Grace Agyemang, Syncottia Belinfontie-Rice, and Paola Martinez (Faculty Mentor: Arlene King-Berry, PhD)

IDEA: Free Appropriate Public Education & Least Restrictive Environment, Corinthiane Johnson (Faculty Mentor: Arlene King-Berry, PhD)

Implementation of Scripts to School and Home: Improving Access to Pediatric Asthma Medications, Amari McDuffie, MHP

Kinetics and Spectral Characterization of UVC-induced Photodegradation of Emetine Hydrochloride, Carin Smith and Emah Assimewlui (Faculty Mentor: Uche Udeochu, PhD)

Multilingual Therapy, Monolingual Workforce: Are SLPs Ready for Artificial Intelligence-Guided Language Training?, Esperanza Tyler, Joann Asare, Toffie Olayinka, and Sulare Rose Telford, PhD

Neuroplasticity and the Biological Mechanisms of Psychotherapeutic Change, Luba Gritsunov

Real-World Challenges Impacting Adult Learners, Elsie Nse Nzolani (Faculty Mentor: Mohammed A. Essack, EdD)

Reclaiming Jezebel: From "Whore" to Healer, Liberator and Agent of Resistance, Kimberly Lightner (Professor: Craig Wynne, PhD)

Spectro-Electrochemical and Computational Investigation of Emetine Redox Chemistry and Metal-Cofactor Effects, David Serra Dize (Faculty Mentor: Uche Udeochu, PhD)

Taking Action in Elementary Classrooms to Ensure Social Studies Education, Vanessa Lewis, Thaisheshherri Stone, Miana Rooths, Yolanda Wells, Madison Frazier and Chris Velasquez (Faculty Mentor: Aaron Bruewer, PhD)

Tuning Excited State Processes Using Surface and Ligand Modification, Mohammed A. Javed, PhD

U.S. Juvenile Justice: Inequality in Sentencing and Rehabilitation, Janiyha Deale (Faculty Mentor: Arlene King-Berry, PhD)

When Placement Fails: Legal Challenges in Special Education Misclassification, Patricia Ogoola (Faculty Mentor: Arlene King-Berry, PhD)

2:30 - 3:30 p.m.: Poster Presentations

A Role for GBX2 in Prostate Cancer as a Regulator of Cytoskeletal Stability Through its Regulation of EEF1A, Charisse Alyson Escudero,¹ and David A. Roeseler;² Samuel T. Waters, PhD;¹ Millpore Signma²

Advancing Without Mastery: The Cost of Accountability Reform, Madison Frazier (Faculty Mentor: Jillian Wendt, PhD)

Barriers to Mathematical Success: The Role of Math Anxiety in Middle School Learning, Shaneen Festus (Faculty Mentors: Kelly Ivy, PhD, and Anika Burtin, PhD)

Beyond the Classroom Walls: Teachers Bridging the Urban School Funding Gap Together, Paris Whealton (Faculty Mentor: Anika Burtin, PhD)

Computers vs. the World: How the Digital Divide Contributes to Educational Inequality in Urban Communities, Danielle Belton (Faculty Advisor: Anika Burtin, PhD)

Countering Erasure: Centering LGBTQ+ Youth of Color in Urban Social Studies Through Culturally Responsive Counter-Narrative, Anthony Manning (Faculty Mentor: Anika Burtin, PhD)

Cultivating Teacher Dispositions for Student Success, Alyson Chocianowski (Faculty Mentor: Anika Burtin, PhD)

Culturally Responsive Partnerships: Building Trust with Families to Support Student Success, Andrew Lofton IV, PhD (Faculty Mentors: Anika Burtin, PhD, and Dowan McNair-Lee, PhD)

Emotional Intelligence and Urban School Leadership, Danzell C.H. Bussey (Faculty Mentors: Kenyatta Graves and Anika Burtin, PhD)

Evaluating Educator Understanding of Special Education Law and Ability to Execute Mandates, Lynette Matthews (Research Mentor: Arlene King-Berry, PhD)

Exploring Hymenectomy as a Clinical Response to Vaginal Penetration Distress, Alicea Peyton, PhD, and Kelsey Webb, PhD

Finding Political Voice Across Cultures, Katherine Sung

From Policing to Pedagogy: Ethical Artificial Intelligence in English Education, Johnathan Vinson (Faculty Mentors: Anika Burtin, PhD, and Kenyatta Graves)

Improving Self-Efficacy and Reducing Learned Helplessness Through Virtual Reality–Enhanced Cognitive Behavioral Therapy, Leah Belle (Faculty Mentor: Kelli A. Hill, PhD)

Music Programs and Student Attendance Trends in Title 1 Schools, Antoine Drayton (Faculty Mentors: Anika Burtin, PhD, and Jennifer Sparkman Barte, PhD)

One Student, Many Settings: Aligning Instructional Practices to Promote Independence in Urban Special Education, Jacqueline Rochelle Johnson (Faculty Advisor: Kenyatta Graves)

Play Under Pressure: How Structured Schedules Limit Social Interactions in ECE, Chacoia Wilkes (Faculty Advisor: Anika Burtin, PhD)

Protecting Music Education in Urban Schools, Diny Ortiz (Faculty Mentors: Anika Burtin, PhD, and Jennifer Sparkman Barte, PhD)

Rehumanizing Math, Aisha Lawrence (Faculty Mentors: Kelly Ivy, PhD, and Anika Burtin, PhD)

SLPs' Knowledge, Attitudes and Practices in Delivering Culturally Responsive, Artificial Intelligence-Supported Care, Leandra M. Gallmon (Faculty Advisors: Sulare Telford Rose, PhD, Toni Walters, MS, and Jennifer Rae Myers, PhD)

Strategies for Supporting Below- Grade-Level High School Readers, LaShena Cross (Faculty Advisor: Anika Burtin, PhD)

Strategies to Strengthen Family Engagement in Urban Early Childhood Classrooms, Angel Pratt (Faculty Mentor: Anika Burtin, PhD)

Supporting Young Learners: Strategies for Overcoming Language Barriers in Early Childhood Education, Isayana Lopez-Cruz (Faculty Mentor: Anika Burtin, PhD)

Synthe-zine: A Case Study of Teaching Synthesis in a Hands-On Zine Workshop, Jacob Hopkins,¹ Bethany Monea, PhD²; Yoko Ferguson, MA¹

Teacher Burnout in Urban Elementary Schools, Lamont Turner (Faculty Advisor: Anika Burtin, PhD)

Teaching the Teacher: Perspectives of Teacher Education at UDC and its Predecessor Institutions, Christopher Anglim, JD

The Exclusion and Punishments of Black Students in Special Education, Derek Long, Teresa Davis (Faculty Mentor: Arlene King-Berry, PhD)

The Influence of Language Diversity in the Current Classroom, Zuleiha Awol (Faculty Mentor: Anika Burtin, PhD)

Tools For Vocabulary Growth & Learning, Jessie Nowlin (Faculty Advisors: McNair-Lee, PhD, and Anika Burtin, PhD)

2:30 – 3:30 p.m.: Creative Works Exhibitions

Amelioration, Asiah Miller

From Suspension to Restoration: Examining School Discipline Reform and the School-to-Prison Pipeline, Jennifer Hernandez (Faculty Mentor: Jillian Wendt, PhD)

Oral New Packet About the Harms of Utah’s HB29, Mila Taggart and Taniyah Paterson (Faculty Mentor: Jillian Wendt, PhD)

11 a.m. – 3:30 p.m.: STEM Center Presentations

Benchmarking DFT Methodologies for Pt (II) of Diimine Acetylide and Stilbene Complexes, Adrion D. Celey (Faculty Mentor: Mohammed Javed, PhD)

Development of New Transition Metal-deoxycholic Acid Complexes, Grace Hall and Amera Al Sarhan (Faculty Mentor: Samuel Dunning, PhD)

Investigation of the Interaction of Emetine with DNA Using Electrochemical Methods and X-Ray Crystallographic Techniques, Esdrizabeta Pereyra Cuello and Keliyah Tucker (Mentor: Uche Udeochu, PhD)

Localization of PIWI in Biomphalaria Glabrata Ovotestes, Intermediate Host for Schistosoma Mansoni, Marymanita A.K. Mensah and Emah Assimewlui (Faculty Mentor: Carolyn Cousin, PhD)

The Effects of Caffeine on Planarian Regeneration, Jayden Henderson (Faculty Mentor: Rosie Sneed, PhD)

The Localization of PIWI in the Cerebral Ganglia of Biomphalaria Glabrata Using Multiple Microscopic Techniques, Emah Assimewlui and Marymanita A.K. Mensah (Faculty Mentor: Carolyn Cousin, PhD)

School of Business and Public Administration

1 – 4 p.m.

Building 38, 2nd Floor, Windows Lounge, Van Ness Campus

Agenda

1 – 1:05 p.m.: Welcome Remarks, Senior Associate CAO Scott Krawczyk, PhD

1:05 – 1:10 p.m.: Introduction of Conference Theme and Judges, Amit Arora, PhD

1:10 – 1:30 p.m.: Keynote Speech, Dean Monica Adya, PhD, Rutgers Business School Camden
1:30 – 1:35 p.m.: Social Robotics Lab Welcome and Rules/Rubrics, Anshu Arora, PhD
1:35 – 3:15 p.m.: Undergraduate / Graduate Poster Competition
3:15 – 3:30 p.m.: Awards Ceremony and Closing Remarks

Poster Presentations

Undergraduate Students

Diverging Artificial Intelligence Governance Pathways: Bridging the Divide between the European Union, United Kingdom and the United States, Joselyn Bercian (Advisor: Anshu Arora, PhD)

When Robots Bend the Truth: Can Regulation Restore Consumer Trust?, Shannen Graham (Advisor: Anshu Arora, PhD)

Design Thinking for Artificial Intelligence Powered Language Learning: Industry-Oriented Innovation for English Helpers, Kayleah Shelton (Advisor: Anshu Arora, PhD)

Artificial Intelligence in the Newsroom: Automated Broadcasters and the Changing Landscape of Crisis Communications, Sarah Love (Advisor: Anshu Arora, PhD)

X-Culture International Business Certification: Turning Global Teamwork into Verified Career Skills, Kayleigh Shelton (Advisor: Anshu Arora, PhD)

Nature's Nectar, Yonasly Corporan and Deangela Hardy (Faculty Advisor: Anshu Arora, PhD)

Design Thinking Innovation: "Trusted-by-Design Honey Experience for India," Angela Copeland (Advisor: Anshu Arora, PhD)

Artificial Intelligence and Drone Technology: Transforming Last-Mile Delivery Costs, Phong Danh and Chris Mulraine (Advisor: Amit Arora, PhD)

Racing Against Time: Artificial Intelligence and Strategic Logistics in Formula One Transportation, Quinton EJechi (Advisor: Amit Arora, PhD)

Enhancing Transportation Supply Chains Through Blockchain and Artificial Intelligence Integration, Kevin Marquez (Advisor: Amit Arora, PhD)

Artificial Intelligence-enabled Stadium Service Supply Chains: Risk Management, Procurement and Operational Logistics in Modern Sports Venues, Sergio Becerra and Vasco Irazola (Advisor: Amit Arora, PhD)

The 50-Hour Dark Window: Quantifying Replenishment Inefficiency in Urban Retail and the Case for Autonomous Intralogistics, Linette Campbell (Advisor: Amit Arora, PhD)

Artificial Intelligence-Enabled Multimodal Transport Decisions for Lower Emissions: Rail vs. Road vs. Sea Using Artificial Intelligence Trade Off Models, Nabila Abdul-Malik (Advisor: Amit Arora, PhD)

Artificial Intelligence in E-Commerce Logistics: Exploring Why Some Firms Achieve Cost Efficiency and Sustainability Gains, Asia Archie and Kayleah Shelton (Advisor: Amit Arora, PhD)

Integrating Human Factors in Industrial Robot Safety: An Analysis of OSHA Injury Reports and Case Studies, Shannen Graham and Noel Mendoza-Umana (Advisor: Amit Arora, PhD)

Artificial Intelligence in E-Commerce: A Comparative Study of China and the United States, Phoumysack Chanthalath and Joselyn Bercian (Advisor: Amit Arora, PhD)

Graduate Students

Transformative Advantages of Artificial Intelligence in Tourism Industry, Vanessa D. Anthony (Advisor: Anshu Arora, PhD)

Artificial Intelligence in Healthcare: Revolution or Risk?, Franck Noah and Waheedullah Habibi (Advisor: Anshu Arora, PhD)

Artificial Intelligence in Financial Services, Nancy Petrovic (Advisor: Anshu Arora, PhD)

Consumer Responses to Artificial Intelligence-Enabled Pharmaceuticals: Trust, Well-Being and Ethical Concerns in Healthcare, Cordelle Shettleworth (Advisor: Anshu Arora, PhD)

Human-Centered and Environmentally Sensitive Design Thinking and Industry-Oriented Research: A Case Study of Nature's Nectar, Marshon Darden-Smith (Advisor: Anshu Arora, PhD)

Bridging the Global Trust Gap: A Design Thinking Approach to Crowdsourced Consulting at X-Culture, Travis Henderson (Advisor: Anshu Arora, PhD)

Designing Sustainable Growth: Scaling Certified Organic Zambian Honey into the German Premium Market, Jordan Watson (Advisor: Anshu Arora, PhD)

Artificial Intelligence as Strategic Leverage: How Brokerage Firms Use Artificial Intelligence to Enhance Customer Engagement, Ignacio Pericet (Advisor: Anshu Arora, PhD)

APRIL 7, 2026

Interdisciplinary Research

8.45 a.m. – Noon

Auditorium, Lamond-Riggs Campus

8:50 – 9 a.m.: Opening Remarks, Senior Associate CAO Scott Krawczyk, PhD

9 – 10 a.m.: Keynote Presentation, Melissa Edwards, PhD

10 - 10:30 a.m.: Emerging Approaches in Artificial Intelligence: Human Interaction and Sentiment Analysis

- *Integrating Socialization and Self-Efficacy in the Application of Artificial Intelligence*, Kelli A. Hill, PhD, and Kahlil Green, PhD, LMWS
- *Hybrid Negation: Enhancing Sentiment Analysis for Complex Sentences*, Miftahul Qorib

10:30 - 11 a.m.: Panel Discussion

- *Scholarly Communications at the UDC Library*, Catherine Meals, MLIS, Tricia Clarke, PhD, and Jacob Hopkins, MLIS

11 - 11:30 a.m.: Engineering Resilient Systems: From Autonomous Rescue Robotics to Battery Safety and Urban Food-Water Solutions

- *Designing an Energy-Efficient Autonomous Rescue Robotics Platform for Hazardous Emergency Environments*, Tomika Williams
- *Investigating Thermal Runaway and Gas Venting in 18650 Lithium-Ion Cell: A Case Study Using ANSYS Fluent In-Built Battery Module*, Justin An
- *Urban Hydrology and Food Self-Provisioning: The Case for Rainwater Harvesting and Aquaponics in Washington, DC*, Christopher Iweriebor

11:30 a.m.- Noon: Archival Research at UDC

- *Integrating Archival Research in Undergraduate Courses: Making it Real – UDC's History for Today's Student*, Jennifer Sparkman Bartee, PhD, and Christopher Anglim, JD

David A. Clarke School of Law

Noon – 2 p.m.

Building 52, 5th Floor, Moot Court Room, Van Ness Campus

Noon - 12:05 p.m.: Introductory Remarks, Interim Dean Angela Gilmore, JD

12:05 –12:10 p.m.: **Welcome, Overview of Research Week and Program Framing**, Yvette N. A. Pappoe, JD

12:10 – 12:35 p.m.: *Discretion Without Equity: State Tax Debt Settlements, Procedural Justice and the Social Costs of Discretion*, Sakinah Tillman, JD

12:35 – 1 p.m.: *Who Governs the Nation’s Capital? Federal Authority and Constitutional Limits of D.C Governance*, Shaquille Felder

1 – 1:25 p.m.: *A Harm Reduction Approach to Legislating*, Emily Cassometus, JD

1:25 – 1:50 p.m.: *The Color of Innocence: Quantifying the Impact of Race on Wrongful Convictions*, Ngozi Ndulue, JD

1:50 –2 p.m.: **Closing Remarks**

UDC Community College

1 - 4:15 p.m.

Auditorium, Lamond-Riggs Campus

Poster Session

To Study the Outcome of Intensity-Modulated Radiation Therapy (IMRT) Treatments of Head and Neck Cancer Using an Open-Source Software System, Yanlong Li (Advisor: Anil Prasad Pyakuryal, PhD)

Building the Quantum Future: Visualizing an Associate’s Degree in Quantum from a Student’s Perspective: Structure and Experiential Learning, Eyob Bulti (Advisor: Anil Prasad Pyakuryal, PhD)

Applications of Various Techniques Diagnostics and Radiotherapy Treatment in Cancer, Ahmecia Williams (Advisor: Anil Prasad Pyakuryal, PhD)

Quantum Computing: When '0' or '1' is Not Enough, Eric Howard (Advisor: Anil Prasad Pyakuryal, PhD)

Presentation Schedule

1:30 p.m.: **Welcome & Opening Remarks**, Michael Ha, MD

1:35 -2:05 p.m.: Presentations from the Air Force Office of Scientific Research's (AFOSR) STEM Internship Program

2:05 p.m.: Keynote Session, Autism Research: An Interdisciplinary, Developmental Approach, Maria Ayoub, PhD

2:20 p.m.: A Fireside Talk on Bench to Bedside Research, Maria Ayoub, PhD, and Tricia Clarke, PhD

UDC Research Presentation

2:40 p.m.: *A Reconceptualized Reformation: Douglass's Transgressive Soul Liberation Ethic*, Lonzo Holmes-Jenkins (Advisor: Wallis Baxter, PhD)

2:50 p.m.: *The Academic Impact of Recreational Reading on Community College Students*, Diamond Johnson, Loryeden Desiree, and Nancy Soriano (Advisor: Ahmad Wright, MA)

3 p.m.: *Punishing Petitioning in Minnesota by Any Means Necessary*, Laurie Cooper (Advisor: Rhonda Dickens, JD)

3:10 p.m.: *Racial Disparities in Home Appraisal Values: Mechanisms and Impact on Wealth Creation*, Souad Khellas (Advisor: Albert A. Pearsall III, MBA)

3:20 p.m.: *The Longevity of Anatomy & Physiology in Nursing*, Miskir Dagnev (Advisor: Stella Akpuaka, DNP)

3:30 p.m.: *U.S. Immigration and Customs Enforcement (ICE): Visits to Hospitals and College Campuses*, Casline Jooste (Advisor: Andrea Doctor, PhD)

3:40 p.m.: *End of 988: Option 3*, Andrea Mendoza (Advisor: Michael Ha, MD)

3:50 p.m.: *The Human Element in Information Security: An Analysis of Social Engineering Attacks with Respect to Insider Threat in the Government*, John Swann (Advisor: Patrick Ezigbo, PhD)

4:00 p.m.: Award Ceremony & Closing Remarks, Bushra Ahmad Saeed, PhD, and Dean Marilyn Hamilton, PhD

4:15 p.m.: Close of Session

APRIL 8, 2026

Interdisciplinary Research Day

9 a.m. – 5 p.m.

Student Center, Ballroom, Van Ness Campus

Continental Breakfast begins at 8:50 a.m.

9:05 - 9:15 a.m.: Opening Remarks, Malva Reid, PhD

9:15 – 10:15 a.m.: Keynote Presentation, President and CEO Elsayed Talatt, PhD, University Space for Research Association

10:15 – 10:45 a.m.: Innovations in Quantum Computing, Space Engineering and Intelligent Systems

- *Quantum-Enabled Smart Biochip for Sustaining Astronaut Health in Deep Space*, Kadijah Talib
- *Calibration of Quantum Computational Software*, Patrick Hall, Eyob Bulti and Anil Prasad Pyakurya, PhD
- *Solving the Travelling Salesman Problem on the IBM Quantum Computer*, Patrick Ezigbo, PhD, Eyob Bulti, and Anil Prasad Pyakuryal, PhD

10:45 – 11:15 a.m.: Strategic Responses to Uncertainty: Earnings Management

- *Geopolitical Risk and the Trade-Off Between Accruals and Real Earnings Management*, Ruonan Liu, PhD, and Sung Namkung, PhD

11:15 – 11:45 a.m.: Integrating Archives and Library Resources in Student Learning and Teaching

- *Library Support for Scholarship of Teaching and Learning*, Catherine Meals, MLIS, and Meghan Kowalski, MSLS

11:45 a.m. – 12:30 p.m.: LUNCH

12:30 – 1:30 p.m.: Cybersecurity, Artificial Intelligence Governance and Smart Infrastructure for Resilient Systems

- *A Multi-Layered Security Approach: Integrating Risk Management, Firewalls, and Intrusion Detection for Sustainable Cyber Defense*, Divan Voges
- *From Prevention to Recovery: “A Comprehensive Study of Risk Management, Incident Response, and Contingency Planning in Information Security,”* Yibekal Chaka
- *Quantum Corners: Improving Emergency Response with Smart Traffic Management and Quantum Sensors*, Cameron Lewis
- *A Triple Stakeholder Approach to Artificial Intelligence Governance*, Anshu Arora, PhD, and Amit Arora, PhD

1:30 – 2 p.m.: Panel Discussion

- *When the Metrics Miss the Mission: Rethinking Research Value at Under-Resourced Institutions*, Rodney Trapp, MBA, Jaret C. Riddick, PhD, and Chad Womack, PhD

2 – 2:45 p.m.: Governance, Global Risk, and International Engagement Across Time

- *Navigating Geopolitical Risk: The Impact on M&A Activities in Upstream Industries*, Sung Namkung, PhD, and Ruonan Liu, PhD
- *Sculpting International Affairs in the Nineteenth Century: Edmonia Lewis and the Centennial Exposition of 1876*, Jasmine Noelle Yarish, PhD
- *Oddities in the Now-Permanent 20-Percent Deduction for Non-Corporate Business Income*, Rebecca Rosenberg, JD

2:45 – 3:45 p.m.: Panel Discussion

- *UDC's Assessment Cycle in Action: A Cross-Campus Conversation*, Rebecca Graham, PhD, Catherine Meals, MLIS, Annie Ramos-Pizarro, PhD, Raysa Leer-Gray, MBA, Kimberly Crews, EdD, and Sandra Jowers-Barber, PhD

3:45 – 4:30 p.m.: Bridging Knowledge, Confidence and Policy in Civic and Professional Education

- Knowledge, Confidence, and Policy Awareness During Immigration and Customs Enforcement (ICE) Encounters Results from a Pre-Post Educational Intervention Study, Andrea Doctor, PhD, and Stella Akpuaka, DNP
- *The Impact of Age, Gender, and Education on A-Priori Time Spent in Filing Taxes: An Empirical Study at a University-Based Volunteer Income Tax Assistance (VITA) Clinic*, Suzan Abed, PhD, Ravi Chinta, PhD, and Debra Robinson-Foster, PhD
- *Educational Gap in Gender-Affirmation Surgery Training Within U.S. Plastic Surgery*, Michael Ha, MD

4:30 – 5 p.m.: Panel Discussion

- *Exploring Artificial Intelligence & Robotics Interdisciplinary Curriculum & Research @ UDC-School of Business and Public Administration*, Anshu Arora, PhD, Amit Arora, PhD, Dean Mohamed Sepehri, PhD, Shannen Graham, Joselyn Bercian, and Phoumysack Chanthath

Poster Presentations

12:30 – 2 p.m.

Student Center, Heritage Hall, Van Ness Campus

Nanoscale Computer Devices, Pawan Tyagi, PhD

Single-Molecule Magnet Bridging Along Exposed Sidewalls of Metal-Insulator-Semiconductor Diodes for Molecular Transport Studies, Pius Suh, PhD

Medicinal Plants and Healthy Aging: Promise or Hype, Darryl Wallace and Phronie Jackson, PhD

Dissemination and Implementation of Evidence-Based Mental Health and Chronic Disease Self-Management Programs for Older Adults, Phronie Jackson, PhD

Accessible Biomechanics: Validating OpenCap/OpenSim Workflow for Clinical Gait Analysis, Ji Chen, PhD

Effectiveness of Green Infrastructures in Removing 6PPD-Q: Literature Review, Roxane Chidlaw and Nancy Reyes

Enhanced TabNet: Attentive Interpretable Tabular Learning for Hyperspectral Image Classification, Messan Anato

Comparative Evaluation of Hemp, Coconut Coir, and Rockwool Substrates in Controlled-Environment Microgreen Production, Olivia Howard

Technology Gap for Monitoring and Treatment of PFAS in Water: A Literature Review, Christian Luna

Safeguarding the Capital's Water Future: The DC Pure Water Initiative, Danielle Simon

APRIL 9, 2026

Interdisciplinary Research

8:50 a.m. – Noon

Student Center, Ballroom, Van Ness Campus

Continental Breakfast starts at 8:45 a.m.

8:50 – 9 a.m.: Opening Remarks, Dhymsey Vixamar-Owens, PhD

9 – 9:45 a.m.: Keynote Presentation, Founder and CEO Anna Quider, PhD, The Quider Group

9:45 – 10:15 a.m.: Evidence, Impact and Innovation: Transforming Health Studies

- *A DRG-Level Study of Variance in Hospital Charges and Its Determinants: Evidence from the 2019 National Inpatient Data in the United States*, Samaneh Torkzadeh, PhD, Mohammad Alshareef, PhD, and Ravi Chinta, PhD

- *Perturbation Platform for Reactive Balance Testing: Device Design and Validation*, Michael K Bennett

10:15 – 11 a.m.: Transformative and Inclusive Approaches to Teaching and Learning Across Disciplines

- *Transformative Reshaping: A Critical Conceptual Framework for Teaching, Belonging, and Inclusive Excellence in Higher Education*, Albert A. Pearsall III, MBA
- *Conceptual Synergies in HBCU Collaborations: Bridging Theory and Practice*, Ravi Chinta, PhD
- *From Textbooks to Cadavers: Comparing Anatomy Teaching Models*, Michael Ha, MD

11– 11:30 a.m.: Artificial Intelligence Across Domains: Security, Human Productivity and Creative Education

- *NATO and Software-Designed Warfare: Resilience as Sub-Threshold Deterrence*, Guy-Maurille Massamba, PhD
- *Imagining an Empathetic Artificial Intelligence Manager: Higher Worker Satisfaction and Productivity*, Kwema J. Ledbetter
- *The 10th Muse: Generative Artificial Intelligence as a Catalyst for Creativity in Art Education*, Davide Prete, MA, and Tracy Conor

11:30 a.m. – Noon: Closing Keynote Presentation, Cindy Achat-Mendes, PhD, Universities Research Association

Poster Presentations

12:30 – 2 p.m.

Student Center, Heritage Hall, Van Ness Campus

Medical Nutrition Therapy for African American Women Undergoing Breast Cancer Treatment, Celia Bastin

Kinetics and Spectral Characterization of UVC-Induced Photodegradation of Emetine Hydrochloride, Carin Smith and Emah Assimewlui

School of Engineering and Applied Sciences

10 a.m. – 4 p.m.

Student Center, Ballroom, Van Ness Campus

10 – 10:05 a.m.: Welcome – Pradeep Behera, PhD

10:05 – 10:10 a.m.: Event Coordinator Welcome and Introduction, Esther T. Ososanya, PhD

10:10 – 10:15 a.m.: Welcome – Dean Devdas Shetty, PhD

10:15 – 10:20 a.m.: Welcome – Chief Academic Officer April Massey, PhD

10:20 – 10:30 a.m. *Variable Emissivity Coatings for Passive Thermal Control on Spacecraft*, Mohamed Ibrahim (Advisor: Jiajun Xu, PhD)

10:30 – 10:40 a.m. *Optimization of Higher-Order Harmonic Surface Tessellations for Additively Manufactured Air-to-Air Heat Exchangers*, Patrick Adegbaye

10:40 – 10:50 a.m. *Investigating Thermal Runaway and Gas Venting in 18650 Lithium-Ion Cell: A Case Study Using ANSYS Fluent In-Built Battery Module*, Justin An (Advisor: Jiajun Xu, PhD)

10:50 – 11 a.m. *Design and Simulation-Based Optimization of a Hybrid Passive Cooling Thermal Management System for Aircraft Electromechanical Actuators*, Mawussi Leopold Nzonou (Advisor: Jiajun Xu, PhD)

11 – 11:10 a.m. *Spectral-Spatial Residual Networks for Hyperspectral Image Classification*, Tewelde Semere (Advisors: Nian Zhang, PhD, and Paul Cotae, PhD)

11:10 – 11:20 a.m. *Hyperspectral Image Classification Using Deep Learning*, Sougre-Nonma (Stephanie) Rouamba (Advisors: Nian Zhang, PhD, and Paul Cotae, PhD)

11:20 – 11:30 a.m. *FL4MDS: A Federated Learning Framework for Misbehavior Detection in Connected Vehicles Under Client Dropout*, Sourou Tossou (Advisor: Thabet Kacem, PhD)

11:30 – 11:40 a.m. *Ethical and Cybersecurity Implications of Artificial Intelligence in ADS-B Systems: A Gap Analysis and Responsible Solutions*, Antione Searcy (Advisor: Thabet Kacem, PhD)

11:40 – 11:50 a.m. *Probabilistic Slope Stability Analysis - Ground Water Table Fluctuations from Climate Change Events*, Yonathan Weldegebriel,¹ Janel Baxter,² (Advisor: Ujwalkumar D. Patil, PhD³)

11:50 a.m. – Noon: *Engaging Female Students in Computing: A Literature Review*, Onyinye Ukeneru-Steve (Advisor: Lily Liang, PhD)

Noon – 12:10 p.m. *Modern Mechatronic Enhancement of the NaviGAI Tor System: Analysis of Statistical and Artificial Intelligence-Based EEG Signal Classification*, Saul Henderson (Advisor: Dean Devdas Shetty, PhD)

12:10 – 12:20 p.m.: *Investigation on In-Plane Thermal Properties of Thickness-Controlled ALD Al₂O₃ on Lithium-ion Battery Cu-Graphite Anodes*, Feiyang Bai (Advisor: Jiajun Xu, PhD)

12:20 – 12:30 p.m.: *Evidential Deep Learning for Uncertainty-Aware Detection of Suspicious Bank Account Activity*, Carlos Luna Sangama (Advisor: Dong H. Jeon, PhD)

1 – 1:10 p.m.: *Motion-Focused Video Frame Interpolation*, Carlos Sac Mendoza (Advisor: Lily Liang, PhD)

1:10 – 1:20 p.m.: *Outdoor Acoustic Drone Localization and Tracking Over a Simple Built Environment*, Filippo Vatteroni (Advisors: Wagdy Mahmoud, PhD, and Max Denis, PhD)

1:20 – 1:30 p.m.: *Energy Optimization in Sole-Source LED Lighting Indoor Farming Using Close-Canopy Dynamic Lighting*, Md Komol Hassan (Advisor: Andrew Blunk, MS; Co-advisor: Hossain Azam, PhD)

1:30 – 1:40 p.m.: *Economic and Environmental Analysis of Combined Cooling Heating Power System integrated with Thermal Energy Storage Running on Hydrogen Diesel Fuel Blends*, Md Sarwar Hossain (Advisor: Hossain Azam, PhD; Co Advisor: Kibria Roman, PhD)

1:40 – 1:50 p.m.: *Evaluating Pretreatment Approaches for Primary Sludge Fermentation Enhancement*, Nishedh Pokharel, Joao V. Poli, Mekhi A. Boulware, and Sophia L. Davis (Advisors: Hossain Azam, PhD, Khoa Nam Ngo, PhD, and Haydee De Clippeleir, PhD)

1:50 – 2 p.m.: *Startup Strategies for Mainstream Partial Denitrification–Anammox Using Methanol, Fermentate and Glycerol*, Nishedh Pokharel, Lee C. Islam, and Hatcher J. (Advisors: Hossain Azam, PhD, Khoa Nam Ngo PhD, and Haydee De Clippeleir, PhD)

2 – 2:10 p.m.: *Lessons Learned from a Pilot-Scale High-Rate Contact Stabilization System with inDENSE Application: Coupling Biological and Physical Selection to Improve Performance and Capacity*, Godswill Okechukwu, Yuang Li, Sakib Ahmad, Arame Diop, Maria Mendoza Ramirez, and Emily Goldberg (Advisors: Hossain Azam, PhD, Haydee De Clippeleir, PhD, and Khoa Nam Ngo, PhD; Co-Advisors: Rumana Riffal, PhD, April Z. Gu, PhD and Arash Massoudieh, PhD)

Poster Presentations

1 – 3:30 p.m.

Student Center, Ballroom, Van Ness Campus

Electron Spin Resonance Characterization of Magnetic Tunnel Junction Molecular Spintronics Devices, Hayden Brown (Advisor: Pawan Tyagi, PhD)

The Fate and Transport of PFAS in Agricultural Soil, Fred Rischmiller

Design and Development of Aerosol Jet-Printed Metal Heaters for 3 ω Thermal Conductivity Measurements, Voss Harrigan (Advisor: Pawan Tyagi, PhD)

Understanding Lunar Soil for Future Moon Bases: Laboratory Testing of LMS-1 Regolith Simulant, Samuel Mather and Nasya Rodriguez (Advisor: Ujwalkumar D. Patil, PhD)

Autonomous System Vehicles: Architecture, Challenges and Future Directions, Marvin Cheguen Mendez, Duru Chukwuma, and Osvaldo Montero-Flores (Advisor: Esther T. Ososanya, PhD)

Target Tracking Using MATLAB and FPGA-Based Systems, Tewelde Semera and Timeka Gomillion (Advisor: Wagdy Mahmoud, PhD)

Accessible Biomechanics: Validating OpenCap/OpenSim Workflow for Clinical Gait Analysis, Charles Kirkland, Tchindro Sossa, Chukwuma Duru, Nadja Zmukic, Danny Saguintaah, and Gafrieka McDuffus (Advisor: Ji Chen, PhD)

Python-Based Computer Vision Obstacle Control and Line Following for DJI Tello Drone, Kristian Harris, Tewelde Semere, and Marvin Cheguen Mendez (Advisor: Esther T. Ososanya, PhD)

Enhanced TabNet: Attentive Interpretable Tabular Learning for Hyperspectral Image Classification, Messan Anato (Advisor: Chiranjibi Shah, PhD)

APRIL 10, 2026

College of Architecture, Urban Sustainability and Environmental Sciences

Noon – 7 p.m.

Student Center, Heritage Hall, Van Ness Campus

11:45 a.m.: Opening Remarks, Pradeep Behera, PhD

Noon – 2 p.m.: Poster Presentations

Authors will be at posters from noon – 1 p.m. Posters will remain up until 4 p.m.

Impact of Soil Preparation Methods on Disease Susceptibility from Phytophthora Nicotianae in Hibiscus sabdariffa, L. Caitlin Arlotta

A Case Report of Inositol and Soluble Fiber Supplementation on Glycemic Control in an Overweight Subject, Yi Li, PhD

From Washington, DC to the Gambia: Advancing Urban Agriculture Through Study Abroad and Global Partnership, Andrew Blunk, MS

Evaluating the Impact of EFNEP on Dietary Quality, Food Safety and Physical Activity Among District of Columbia Students, Nancy Irias

Closing the Knowledge Gap: Improving Faculty Preparedness for Immigration and Customs Enforcement (ICE) Encounters Through a Targeted Educational Intervention, Phronie Jackson, PhD

Dissemination and Implementation of Evidence-Based Mental Health and Chronic Disease Self-Management Programs for Diverse Older Adults in an Urban Land-Grant Setting, Phronie Jackson, PhD

Lessons Learned from Replicating a Graduate STEM Mental Health Initiative at an Urban HBCU, Phronie Jackson, PhD

2 – 7 p.m.: 10-Minute Oral Presentations

2 p.m.: *Bat Activity and Species Richness in Urban Farms and Gardens, Kelly Russo-Petrick, PhD*

2:15 p.m.: *Controlled-Environment Agriculture (CEA) Production Impacts and Scalability Using Input–Output Analysis, Andre De Souza Coelho*

2:30 p.m.: *Factors Affecting Skin Carotenoid Score in a Racially Diverse Sample, Amy Schweitzer, PhD*

2:45 p.m.: *Closing the Loop: Utilizing Urban Byproducts from Washington, DC in Hydroponic Basil Production, Andrew Blunk, MS*

3 p.m.: *Health Impact Assessment as an Applied Research Tool for Urban Communities, Debarati “Mimi” Majumdar Narayan, PhD*

3:15 p.m.: *From Atoms to Architecture: Bridging Materials Science and Human-Centered Design through the Value-Inclusive Design Model, Eric Harris, PhD*

3:30– 4:15 p.m.: BREAK

4:15 p.m.: *Designing for Energy: Biogas Infrastructure in Mixed-Use Urban Development, Oscar Rodriguez*

4:30 p.m.: *From Office to Home: Evaluating Affordability Strategies in Washington, DC’s Building Conversions, Naseer Ahmad Yama*

4:45 p.m.: *Reinterpreting Kurdish Courtyard Houses for Contemporary Urban Living in Erbil, Shajwan Dara Mohammed*

5 p.m.: *Cultivating DC: Designing the Urban Indoor Farm, Gabreleul Yacob*

5:15 p.m.: *Redefining Spaces for Animal Welfare: Spatial Strategies for Stray Dog Management in Brazil*, Cesar Augusto Borges dos Santos

5:30 p.m.: *A Blueprint for the Divine: Reimagining the Third Jewish Temple through Scriptural and Contemporary Architectural Practices*, Trever Bellew

5:45 p.m.: *Re-envisioning Washington, DC's Chinatown: A Revitalized Cultural District*, Esther Lim

6 p.m.: *Modernizing the Mongolian "Ger" to Improve Environmental Health*, Khowgorzul (Hangi) Bumdelger

6:15 p.m.: *A Sustainable Flood Adaptive Urban Community Housing in Bangladesh*, Redlam Islam

UDC Research Centers

School of Engineering and Applied Sciences:

- Center for Biomechanical and Rehabilitation Engineering (CBRE)
- Center of Excellence for Acoustic and Seismic Sensing of Urban Environments
- Center of Excellence for Renewable Energy
- NASA-MIRO: Center for Advanced Manufacturing in Space Technology and Applied Research at UDC (CAM-STAR)
- NSF-CREST: Center for Nanotechnology Research and Education (CNRE)
- SEAS Research Center
- UDC Center of Climate Change Analytics (C³A)

College of Agriculture, Urban Sustainability, and Environmental Sciences:

- Health, Diet and Nutrition Lab
- Architecture and Urban Sustainability Lab
- Water Resources Research Institute
- Center for Urban Resilience, Innovation and Infrastructure

School of Business and Public Administration:

- Artificial Intelligence, Social Robotics and Behavioral Research Lab
- Logistics and International Trade (LIT) Analytics Research Center

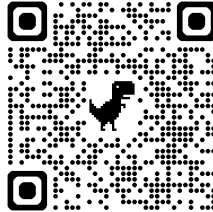
UDC Community College:

- UDC Community College Interdisciplinary Research Club
- QuARC: Quantum Information, Artificial Intelligence and Radiotherapy Treatments in Cancer

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