

INTERDISCIPLINARY ACADEMIC AFFILIATE UNITS

ANIMAL SCIENCES AGRICULTURAL EDUCATION AGRICULTURAL ECONOMICS ARCHITECTURAL ENGINEERING BIOLOGY **BIOLOGICAL ENGINEERING** BUSINESS MANAGEMENT CHEMICAL ENGINEERING CHEMISTRY CIVIL ENGINEERING COMPUTER SCIENCE **BUILT ENVIRONMENT** EDUCATION ECONOMICS ELECTRICAL ENGINEERING HISTORY FAMILY & CONSUMER SCIENCE INDUSTRIAL SYSTEMS ENGINEERING JOURNALISM AND MASS COMMUNICATIONS LIBERAL STUDIES MATHEMATICS MECHANICAL ENGINEERING NATURAL RESOURCES NURSING POLITICAL SCIENCE PHYSICS PSYCHOLOGY SOCIOLOGY/SOCIAL WORK

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INTERDISCIPLINARY WASTE MANAGEMENT INSTITUTE

DIRECTOR Godfrey Uzochukwu, Ph.D INTERIM PROVOST Tonya Smith-Jackson, Ph.D CHANCELLOR Dr. Harold L. Martin Sr.

REDUCE RECYCLE

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

VOLUME 26 NO. 25 • SUMMER 2022

ENVIR®NEWS Waste Management Institute

UNDER THE LEADERSHIP OF THE COLLEGE OF AGRICULTURE AND ENVIRONMENTAL SCIENCES - MOHAMED AHMEDNA, PH.D., DEAN

University of North Carolina System General Administration (UNC-GA) Mandate

"...This office has reviewed your request to establish a Waste Management Institute. We conclude that the proposed unit, as described, will be an academic support unit with more limited research and public service functions...Establishment of a Waste Management Institute is hereby approved ..."

- C. D. Spangler Jr. '94 President

N.C. A&T's Chancellor's Mandate

"...Coordination of waste management and environmental efforts (instruction, research and outreach of the university which now exist in individual departments; implementation of certificate programs in waste management...advisement of students who are interested in environmental and waste management careers; and clearing house for the university's environmental/waste management activities ..." - Edward B. Fort. '95 Chancellor

EPA Announces Selections of Charter Members to the Science Advisory Board (SAB)



"...Congratulations to Dr. Godfrey Uzochukwu, professor/founding director of the interdisciplinary Waste Management Institute at #NCAT, one of 47 members appointed Tuesday to the @EPAScientific Advisory Board by Administrator @ EPAMichaelRegan. #AggiesLead..." Chancellor Harold L. Martin Sr., @WholsHLM

Godfrey Uzochukwu, Ph.D., is among 47 SAB members with dual appointments to the Agricultural Sciences Committee.

"This highly qualified, diverse group of experts will ensure that EPA is receiving sound science-based advice to inform our work to protect people and the environment from pollution," **said EPA Administrator Michael S. Regan**. "We worked expeditiously and deliberately to finalize the new Science Advisory Board, and now we can move forward knowing EPA's work is guided by the most credible, independent expertise."

N.C. A&T State University to Host a National Conference on Next Generation Technologies for Small-Scale Producers on Sept. 7-9, 2022.

"...The purpose of the conference is to create a road map for developing and delivering the next generation of soil, air and water technologies in support of sustainable production systems on small and limited resource farms..." said Dr. Godfrey Uzochukwu, Chair, Conference Organizing Committee.

Conference attendees will include socially disadvantaged farmers, urban and controlled environment farmers, beginning farmers and ranchers, heirs, property holders, and absentee landowners, underserved rural community citizens, military veterans and retired farmers, agricultural professionals and agribusiness stakeholders, students, researchers, scientists and agency representatives, and other interested agricultural industry professionals.

The conference is funded by the United States National Institute of Food and Agriculture (NIFA) and sponsored by **North Carolina A&T State University** (*The Interdisciplinary Waste Management Institute, Center for Environmental Farming Systems, Cooperative Extension Service, College of Agriculture and Environmental Sciences, College of Science and Technology, Extended Campus:*

REUSE



REIMAGINE

Continuing Education), Alabama A&M University (Small Farms Research Center), Alcorn State University (The Socially Disadvantaged Farmers and Ranchers Policy Research Center) and Virginia State University (Small Farm Outreach Program). Conference topics include workshops, farmer to farmer interactions, networking, technical presentations (climate adaptation, computers and cyber security, farm justice and food security, planting and harvesting automations, small business innovations and sustainable farming, food processing technologies, field demonstrations of next generation sustainable technologies).

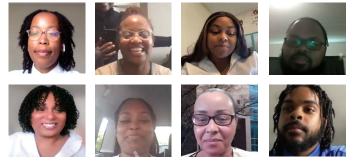
REDESIGN



Undergraduate Interdisciplinary Waste Management Certificate Recipients (2022/22)

Graduating seniors (B.A./B.S.) and graduate students (M.S./Ph.D.) received Waste Management Certificates at special ceremonies on Zoom because of COVID-19. The students completed their degree and certificate requirements. The Waste Management Certificate highlights the training of students in environmental sustainability, security and waste management issues and signals to employers that N.C. A&T graduates are ready to broadly advance waste management and sustainability in their fields. The certificate adds value to the undergraduate and graduate training at N.C. A&T.

STUDENTS



Undergraduate WMI Certificate Recipients (2021-22)

Kendal J. Anderson L'Quaan Cevante Atkinson Janae Brown Nascier Gabriel Bryant Gabriel Maynor Faulcon Esmeralda Molina Flores Myles Greer Samantha Griffin Jared E. Jackson Victor Larry James II Devante Jones Terrill Dominique Jones Timothy Jerome Jones Jr. James Knox Summer McKinley Lauder Quincey Le'Ander Lee Taylor L. Mitchell Osjale' K. Moorman Jewel Manuel-Nelson Ashley Murphy Sydney Parker Jaelyn Phillips Lamir Shombre' Quick Sheerhonda R. Rhodes Shalores Rupert Jada Marie Sherman Michael Sledge Chaya Imani Terry Carl Jerome Scott Jr. Amira Slocum Christopher Todd Lakasia D. Wall Justice Wright

Environmental Studies Civil Engineering Chemical Engineering Environmental Studies Animal Science Chemical Engineering Civil Engineering Mechanical Engineering Pre-Law

Environmental Health Environmental Studies Chemical Engineering Architectural Engineering **Electrical Engineering Environmental Studies Environmental Studies Environmental Studies** Architectural Engineering **Civil Engineering** Architectural Engineering Mechanical Engineering Industrial & Systems Eng Bioengineering Architectural Engineering Animal Science **Environmental Studies Environmental Studies Environmental Studies** Electrical Engineering **Environmental Studies Electrical Engineering** Animal Science **Environmental Science**

Advanced WMI Certificate Recipients

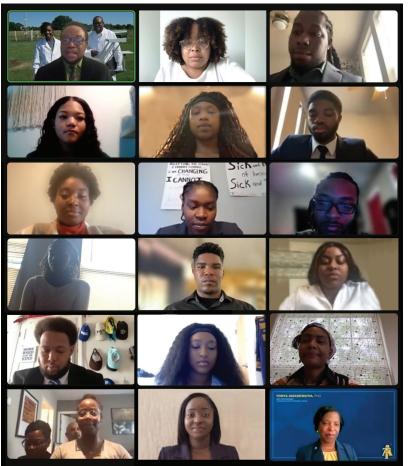
Edie Renee Brewer Ebony Lashay Corbitt Sarah Lewers Janeva Williams Environmental Justice Environmental Health Environmental Health Environmental Studies

Interdisciplinary Graduate Environmental Certificate

Edie Renee Brewer Ebony Lashay Corbitt Sarah Lewers

Environmental Justice Environmental Health Environmental Health

INTERDISCIPLINARY WMI CERTIFICATE CEREMONY MAY 13, 2022 ON ZOOM



FACULTY AND ADMINISTRATION

















Career Paths for Graduates Who Received WMI Certificates

Major and Career Path

Animal Science Environmental Animal Health and Specialist Biology **Environmental Biology Business Environmental Business** Chemistry **Environmental Chemistry** Communication **Environmental Communication** Construction Management Environmental Safety **Criminal Justice Environmental Crimes** Economics **Environmental Economics** Education **Environmental Education** Environmental Studies/Science Environmental Scientists/Consultants/ Specialists Engineering Environmental Engineering Journalism **Environmental Journalism** Landscape Architecture Environmental Design/Visual Resource Specialist Mathematics Environmental Mathematics/Statistics Nursing Environmental Health/Occupational Safetv **Occupational Safety and Health Environmental Safety** Physics **Environmental Physics Political Science Environmental Policy/Politics** Psychology Environmental Psychology Sociology **Environmental Sociology** Social Work Environmental Social Justice Other Environmental Consultants

Public Service – Outreach and Engagement

Environmental Security, Sustainability and Waste Management Workshop

Pre-College Workshop on Environmental Security, Sustainability and Waste Management was conducted on Zoom high school students and teachers in June and July 2021 and 22 for 25 high school students. The theme of the workshop was "Environmental Security and Waste Management" highlighting challenging environmental security, sustainability, and waste management questions.

Uzochukwu to Serve on Global Council for Science and Environment (GCSE) Board of Directors

Godfrey Uzochukwu Ph.D. has been appointed to serve on the Global Council and Environment Board of Directors effective Jan. 1, 2022. GCSE is a nongovernmental organization established in 1990 that advances the use of science to inform environmental decision-making. The work of GCSE spans boundaries between science and decision-making to strengthen the impact of durable solutions to environmental challenges. GCSE engages scientists, educators, policymakers, business leaders and officials at all levels of government. As a member of the GCSE Board of Directors. Uzochukwu will help GCSE achieve its mission to advance the use of science to inform environmental decision-making given his expertise in agricultural and environmental sciences.

Sustainability Leadership at N.C. A&T

North Carolina Agricultural and Technical State University has a history of providing leadership in addressing sustainability issues such as infrastructure, energy and climate change, waste management, water usage, transportation and education through Colleges, Facilities Department, Budget Office, Division of Research and Economic Development, Campus Enterprise, Office of Strategic Planning and Institutional Effectiveness, University Farm and Interdisciplinary Waste Management Institute (WMI). These collaborations have made the university a major contributor to understanding sustainability on a global scale. The University has taken advantage of Higher Education Sustainability Bill (The Higher Education Opportunity Act-P.L. 110-315) signed by President George W. Bush in 2008. In March 2011, Chancellor Harold Martin Sr. launched a robust sustainability program and encouraged everyone to integrate sustainability into their daily operations.

Interdisciplinary Research

Development of effective environmental and waste management solutions requires converging approaches such as the integration of knowledge from air, water, energy, infrastructure, climate and education. Search for solutions must draw upon innovative ideas from different disciplines.



Water and Air Quality

- Manoj Jha, Ph.D. (Leader)
- Arnab Bhowmik, Ph.D.
- Godfrey Uzochukwu, Ph.D.
- Niroj Aryal, Ph.D.
- Renzun Zhao, Ph.D.

Waste Management

- Renzun Zhao, Ph.D. (Leader)
- Godfrey Uzochukwu, Ph.D.
- Arnab Bhowmik, Ph.D.
- · Abolghasem Shahbazi, Ph.D.
- Niroj Aryal, Ph.D.

Energy and Climate

- · Abolghasem Shahbazi, Ph.D. (Leader)
- Lijun Wang, Ph.D.
- \cdot Godfrey Uzochukwu, Ph.D.
- Omar Basha, Ph.D.
- Manoj Jha, Ph.D.
- Arnab Bhowmik, Ph.D.
- · Solomon Bililign, Ph.D.
- · Ademe Mekonnen, Ph.D. (Leader)

Education and Infrastructure

- · Godfrey Uzochukwu, Ph.D. (Leader)
- Leotis Parrish, Ph.D.
- · George Robinson, Ph.D.

Interdisciplinary Waste Management Institute Program Components



HISTORIC MOMENT April 14, 2022





POTUS - President of the United States visit with EPA Administrator (N.C. A&T graduate) at N.C. A&T State University on 4.14.22. R-L Dr. Uzo, POTUS and Administrator

UILDING A BET ER AMERIC GREENSBORO, NC

WMI Interdisciplinary Steering Committee

Michael Atkinson, Ph.D. Renzun Zhao, Ph.D. Godfrey Ejimakor, Ph.D. Alesia Ferguson, Ph.D. Gregory Goins, Ph.D. George Robinson, Ph.D.

Department of Mechanical Engineering Department of Civil and Architectural Engineerin Department of Agribusiness Department of Built Environment Department of Natural Resources (Psychologist), Department of Psychology Godfrey Uzochukwu, Ph.D. Interdisciplinary Waste Management Institute

Interdisciplinary WMI Faculty Affiliate

Uchenna Anele, Ph.D. Niroj Aryal, Ph.D. Michael Atkinson Samuel Atkinson, Ph.D. Fafanyo Asiseh, Ph.D. Kory Bennett, Ph.D. Arnab Bhowmik Clayton Clark II Heather Colleran, Ph.D. Derome Dunn, Ph.D. Godfrey Ejimakor, Ph.D. Alesia Ferguson, Ph.D. Gregory Goins, Ph.D. Salam Ibrahim, Ph.D. Louis Jackai, Ph.D. Leotis Parrish Ph D George Robinson, Ph.D. Amy Schwartzott, Ph.D. Godfrey Uzochukwu, Ph.D. Tobin N Walton, Ph.D. Renzun Zhao, Ph.D. Gregory Meyerson, Ph.D.

College of Agriculture and Environmental Sciences College of Agriculture and Environmental Sciences College of Engineering Industrial Systems Engineering College of Business and Economics College of Engineering College of Agriculture and Environmental Sciences College of Engineering College of Agriculture and Environmental Sciences College of Engineering College of Agriculture and Environmental Sciences College of Science and Technology College of Agriculture and Environmental Sciences College of Agriculture and Environmental Sciences College of Agriculture and Environmental Sciences College of Engineering College of Health and Human Sciences College of Arts and Humanities Interdisciplinary Waste Management Institute College of Health and Human Sciences College of Engineering

College of Arts, Humanities and Social Sciences

WMI NOTEWORTHY SUMMARY

- Awarded 2 301 WMI certificates and adding value to degree programs
- · Offers the best interdisciplinary supporting courses
- · Selected Interdisciplinary Model for N.C. A&T – Futures Goal II (Created Interdisciplinary Energy and Environmental Systems Ph.D. (Renamed Science and Technology Ph.D.); Informed Interdisciplinary Leadership Studies Ph.D.; Inspired the creation of Interdisciplinary Computational Science and Engineering Ph.D.; Interdisciplinary Masters, Bachelors and Certificate Programs).
- Promotes Big Ideas of Sustainability - infrastructure, energy, climate, waste management, water conservation, transportation and education
- Forum for exchange of big ideas among faculty and students from different disciplines
- · Lead Institute for the Interdisciplinary Graduate Certificate Tracks in Environmental Engineering, Environmental Sciences, Environmental Justice and Environmental Health and Safety
- Awarded \$1.4 million to establish interdisciplinary WMI
- Awarded \$18 million NSF Inter-institutional (A&T, NCSU, UNC-CH and UT Austin) for saving water

North Carolina Agricultural and Technical State University (N.C.A&T) is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, master's and doctoral degrees. N.C. A&T does not discriminate against any person on the basis of age, color, disability, gender identity, genetic information, national origin, race, religion, sex, sexual orientation, veteran status, or any other basis protected by law. | N.C. A&T is an AA/EEO and ADA compliant institution.

WMI Mission: To enhance awareness and understanding of waste management issues and develop programs that protect the environment and improve the quality of life.

This newsletter is a publication of the Waste Management Institute of North Carolina Agricultural and Technical State University. It is intended to increase the awareness of teachers, students, industry, government and community groups about environmental, sustainability and waste management issues.

- · Campus-wide resource for faculty and students (awarded \$384,000 to students in different colleges, provided \$33,191 for faculty support, created core WMI course)
- Works with 18 academic departments to tailor WMI core and over 360 courses offered by departments to follow an interdisciplinary waste management curriculum
- · Facilitated top 2% in 2017 (No. 14 overall) and No. 4 in USA rankings (UI Green Metric – University Sustainability World Ranking for N.C. A&T and ranked in the top 7% for five consecutive years 2013, 2014, 2015, 2016 and 2017)
- · Selected No. 1 by the Environmental Careers Organization for innovative programming and diversity
- · Recognized by the Greensboro Chamber of Commerce as an innovative environmental program
- Top 28 interdisciplinary institute/center in USA (2013 NCSE report - 360 were profiled)
- · Leader in Convergence Research Thrusts for environmental and waste management solutions involving air, soil, water, bio-energy, global climate, education and infrastructure

From the Editorial Staff:

For more information about the Waste Management Institute call, fax or write Director, Waste Management Institute, 1601 East Market Street, North Carolina A&T State University, Greensboro, NC 27411 336-334-7030 · FAX 336-334-7399 Email: uzo@ncat.edu

We welcome creative ideas that are suitable for inclusion in the EnviroNews. Send a brief summary of your ideas to: WMI, Carver Hall 261 North Carolina A&T Greensboro, NC 27411 PHONE: 336 334-7030 Email: uzo@ncat.edu

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