



Transportation Institute

North Carolina Agricultural and Technical State University

Second Annual CATM Symposium



The second annual Center for Advanced Transportation Mobility (CATM) Symposium was held at Warm Hearth Village in Blacksburg, Virginia on Nov. 5, 2018. The symposium was a chance for students, faculty and researchers from the three consortium member institutions (North Carolina Agricultural and Technical State University (lead), Virginia Technical Institute, and Embry–Riddle Aeronautical University) to share the various activities occurring within the University Transportation Center (UTC) over the previous year.

CATM is a UTC funded by the U.S. Department of Transportation in 2016 under the FAST Act. The consortium's research efforts concern improving mobility for people and goods with a focus on transportation issues faced by vulnerable populations, which include people with disabilities and/or socioeconomic challenges, the elderly, youth, bicyclists and pedestrians.

The keynote speaker for the event was Mohammed Yousuf, program manager of U.S. DOT's Accessible Transportation Technologies Research Initiative (ATTRI). Yousuf is an inventor, engineer, and innovator leading the drive toward Universal Access and Mobility. Through his leadership of ATTRI and the Universal Automated Community Transport (UACT) program, Yousuf works to remove barriers a traveler might encounter on any part of a trip, from the planning stage to arriving at the final destination. His work explores ways to leverage vehicle autonomy, robotics, and enhanced indoor and outdoor navigation tools to accomplish this goal.

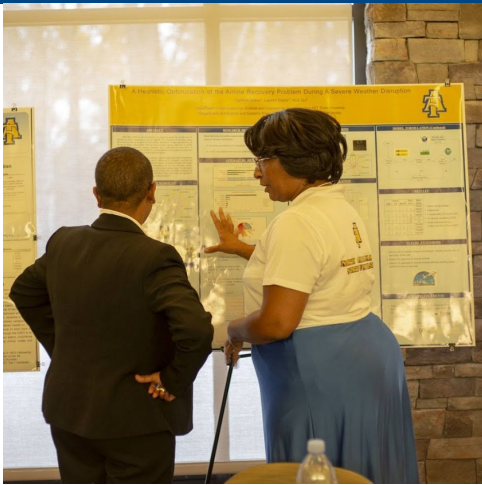
In promoting a new future reality for universal mobility, Yousuf, who knows the challenges faced by vulnerable road users firsthand, foresees a system incorporating augmented, virtual and mixed reality tools that allow people of all abilities to meet their transportation needs with ease and independence. He is also involved in research involving transportation related technologies, including wireless communications, mapping, positioning and navigation, and robotics and intelligence for surface transportation.

Above: Maranda McBride, director of CATM, welcomes attendees. Below: John Antin, research program manager for CATM, and Mohammed Yousuf, program manager for US DOT's Accessible Transportation Technologies Research Initiative.



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Cynthia Glass, N.C. A&T graduate student, explains her research poster on severe weather transportation to Carletta Dudley, education and outreach coordinator for CATM.



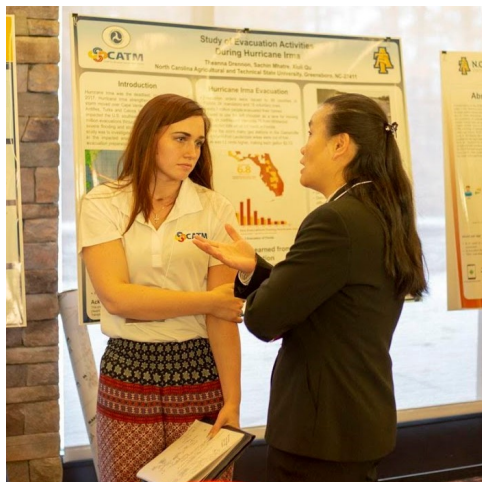
Kareem Hogan, a Ph.D. candidate in electrical engineering at N.C. A&T, explains his poster and research.



Andrew Aldin, VTTI senior research associate and leader of VTTI's Eco-Transportation and Alternative Energies Group, addresses the crowd.



Dahai Lui, aviation research coordinator for CATM, shares news about the latest research at Embry-Riddle Aeronautic University.



Graduate student, Theanna Drennonn, in discussion with Shelly Qu, N.C. A&T professor in the Department of Industrial and Systems Engineering.



Virginia Lingham, program manager for the Office of Strategic Innovation, Virginia DOT, updates attendees.

Student Awards and Activities

Janelle Horton Named 2018 University Transportation Center (UTC) Outstanding Student of the Year

Janelle Horton received her bachelor's degree in information technology with a minor in business administration from the University of North Carolina at Pembroke. She graduated from N.C. A&T in December with a master's degree in industrial and systems engineering.

While at N.C. A&T, Janelle combined her interests in vehicle transportation and music by researching pedestrian safety during the use of personal listening devices. The experiment, designed to note the differences in walking behaviors of pedestrians wearing bone conduction or air conduction headsets, will hopefully lead to information allowing for safer alternatives for pedestrians who are distracted by their mobile devices.

Specifically, the experiment immersed participants in a virtual reality environment where they crossed an intersection while listening to different kinds of music under various conditions. The tests included 60 participants, ranging in age from 18 to 25. The goals of the study were:



1. *to evaluate street crossing behavior with no auditory distractions,*
2. *to evaluate street crossing behavior while listening to music at two different intensities through earbuds, and*
3. *to evaluate street crossing behavior while listening to music through a bone conduction headset.*

Results of the research did not register any significant associations in street crossing behavior based on the type of listening device used. However, significant associations were noted between genders and between the types of music. The results showed that females had more hits by a vehicle, more missed crossing opportunities and longer wait times in comparison to males when listening to music while crossing the street. Additionally, both genders experienced more hits, more missed opportunities, and longer wait times when listening to pop music rather than R&B music.



Janelle travelled to Washington, D.C. to the CUTC's 2019 Awards Banquet on January 12 where she received recognition and a certificate.

"I am honored to receive this award acknowledging the research I've conducted as a graduate student. It validates the planning and dedication that went into designing and executing the experiment. The guidance from Dr. McBride throughout this experience helped me to understand the importance and impact research can have in the academic community."

From left: Jeffrey A. Rosen, deputy secretary, U.S.. DOT; Janelle Horton; Dr. Kevin C. Womack, director, Office of Research, Development and Technology.

N.C. A&T's 2018 Dwight David Eisenhower Transportation Fellowship Program Recipients

Three N.C. A&T students — Kayla Jefferson, Gregory Stewart and Patrick Stanley — were awarded grants from the Administration of the Dwight David Eisenhower Transportation Fellowship Program (DDETFP). The DDETFP is intended to attract, enhance and retain the nation's brightest minds and top talent to transportation management, research and engineering professions. The undergraduate Eisenhower HBCU Fellowship is awarded on the basis of merit including: academic records, class standing, GPA, transcripts, transportation work experience, transportation research and personal recommendations.



Kayla Jefferson, a senior in supply chain management, expressed these thoughts:

“The Dwight D. Eisenhower Transportation Fellowship Scholarship allows me to continue my education without stressing about tuition. It means I’ll be able to attend a transportation conference alongside other bright students like myself. It furthers me towards my goal of becoming a chief operating officer in the future. All of these things are made easier and more attainable by this grant. I thank you so much. This award could not have come at a better time in my educational career.”

Gregory Stewart, a senior in finance and supply chain management, said:

“I am very thankful to be a recipient of this grant. With tuition rising almost every year, this award will help me and my family financially, tremendously. Not only will it defray the cost of college tuition, but it will also decrease the amount of financial stress that college has put on my family. This grant will help further my education and allow me to get one step closer to reaching my career goal of becoming a supply chain analyst.”



Patrick Stanley, a supply chain management senior said:

“This grant is very important to me. The fellowship will give me the opportunity to gain more experience with transportation and research. Supply chains always face the challenge of transporting raw materials for production and finished products efficiently and effectively. I want to learn more about the transportation network, infrastructure and policies. After graduation, I wish to pursue employment as a transportation analyst or planner with a private carrier or the government.”



2018-19 Center for Advanced Transportation Mobility Scholars



Juwan Byrd is a junior supply chain major from Cary, North Carolina. He has interned with Altria Client Services in Richmond, Virginia. He is an active participant in the N.C. A&T Aggie Mentoring Program and Sigma Iota Epsilon Honor Society. Juwan is Green Belt Six Sigma certified.



Kayla Curry is a senior supply chain major from Raleigh, North Carolina. She is an active member of the Institute of Supply Chain Management (ISM). When participating in the 2018 Shelley Stewart Case Competition, Kayla's team provided solutions for continuing the operation of the supply chain during natural disasters. Her internships have included United Therapeutics, General Electric and IBM.



Marvin Edge Jr. is a junior supply chain major from Cerro Gordo, North Carolina. He is an active member of N.C. A&T student chapter of the Association for Supply Chain Management. Marvin is the field training prep commander for the N.C. A&T campus Air Force ROTC. He was selected for the 2019 Apple HBCU Scholars Program and is Six Sigma Green Belt certified. Marvin's career goal is to work as a logistics readiness officer in the U.S. Air Force.



Malik Norwood, who graduated in December with a degree in supply chain management, is from Greensboro, North Carolina. Malik was selected as a 2017-2018 Dwight David Eisenhower HBCU Transportation Fellow. He attended the 2017 and 2018 Transportation Research Board (TRB) annual meetings, the First Annual CATM conference and the Fifth Annual University Transportation Conference for the Southeastern Region. He has studied abroad in Athens, Greece and is Lean Six sigma Green Belt certified. Malik was a participant in the N.C. A&T Summer High School Transportation Institute.



Jacob Smith is a junior supply chain major from Greensboro, North Carolina. Jacob participated in the First Annual CATM Research Symposium in October 2017. He attended the Fifth Annual University Transportation Center (UTC) Conference for the Southeastern Region held on the Campus of the University of Florida in November 2017 and the Transportation Review Board Conference in Washington, D.C. in January. Jacob was a participant in the N.C. A&T Summer High School Transportation Institute.

Center for Advanced Transportation Mobility Scholars continued



Joseph Smith is a junior supply chain major from Greensboro, North Carolina. Joseph participated in the First Annual CATM Research Symposium in October 2017. He attended the Fifth Annual University Transportation Center (UTC) Conference for the Southeastern Region held on the Campus of the University of Florida in November 2017 and the Transportation Research Board Conference in Washington, D.C. in January. Joseph was a participant in the N.C. A&T Summer High School Transportation Institute.



Patrick Stanley is a senior supply chain major from Four Oaks, North Carolina. Patrick has interned as a research assistant with the Center for Advanced Transportation Mobility. During the summer of 2018, Patrick participated in the U.S. DOT Summer Transportation Internship Program for Diverse Groups with the Federal Railroad Administration. He was selected as a 2018/2019 Dwight David Eisenhower HBCU Transportation Fellowship Award recipient. Patrick also attended the 2019 Transportation Research Board Annual Meeting in Washington D.C. in January. He is a member of Beta Gamma Sigma Honor Society.



Kiana Williams is junior supply chain management student from Columbus, Ohio. In the summer of 2017, Kiana served as a procurement intern for Lbrands, and she was a vendor and contract management intern for Zoetis in 2018. Kiana is a member of Zeta Phi Beta Sorority, Inc., Aggie Toastmasters and Alpha Lambda Delta Honors Society. Additionally, she has been an Honors College mentor, resident assistant and executive student leader for N.C. A&T Greek Life. For the spring semester of 2019, Kiana is working as a supply chain co-op intern for Georgia-Pacific in Atlanta, Georgia. This summer, she will be interning with Chick-Fil-A Corporation. Kiana is Six Sigma Green Belt certified.

Tyreak Carr is a junior supply chain major from Riverdale, Georgia. He is the director of marketing and programs for the N.C. A&T campus chapter of the Association for Supply Chain Management. He is a mentor for three first generation college students in his family and an active member of the N.C. A&T Blue and Gold Marching Machine.

Kristian Conner, who graduated with a degree in supply chain management in December of 2018, is from Gastonia, North Carolina. Kristian enhanced her academic career by attending several transportation research conferences. She participated in the Annual Transportation Research Board Meeting in 2017 and 2018 and the Southeastern Transportation Center conference in 2017. Kristian is a graduate of the N.C. A&T Summer High School Transportation Institute.

Aunjle Woodson is a senior supply chain major from Greensboro, North Carolina. He is secretary of the Association for Supply Chain Management and has interned with Georgia Pacific Supply Company located in Greensboro, North Carolina. Aunjle is a four-year veteran of the U.S. Air Force where he worked as a logistics planner. He participated in a study abroad trip to Athens, Greece where he learned about international supply chains and logistics.

Educational Trips and Conferences

The Second Annual CATM Symposium

N.C. A&T was represented at the Second Annual CATM Symposium in Blacksburg, Virginia, on Nov. 5, 2018, by the following students: Marvin Edge, Juwan Byrd, Malik Norwood, Kayla Curry, Jacob Smith, Joseph Smith, Devi Chilukuri, Cynthia Glass, Theanna Drennon, Miriam Alabi, Justice Darko, Karreem Hogan, David Richmond, Sai Charan Dekkata and Larkin Folsom.



From left: Joseph Smith, Juwan Byrd, Kayla Curry, Malik Norwood, Marvin Edge and Jacob Smith.

The University Transportation Center Conference for the Southeastern Region

The University Transportation Center (UTC) Conference for the Southeastern Region was held on Oct. 24 - 25, 2018. The UTC Conference was hosted this year by the Center for Connected Multimodal Mobility, a Tier 1 university transportation center located in South Carolina and led by Clemson University. The conference aims to bring together faculty, students, practitioners and public agencies in the southeast, to disseminate information about on-going activities at all partner universities and to further enhance collaboration among the academic community, as well as the private and public sector agencies in the region. Students Patrick Stanley and Kamera Scott attended from N.C. A&T.



Kamera Scott checks out the self-driving car.

2019 Transportation Review Board Annual Meeting

On January 13, N.C. A&T students, staff and faculty traveled to Washington, D.C. for three days to attend the 98th annual meeting of the Transportation Research Board (TRB) with other global transportation professionals including policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academia.



(from left): Jacob Smith, Gregory Stewart, Kayla Jefferson, Joseph Smith, Brandon Rogers (former student), Patrick Stanley and Cynthia Glass.



Kayla Jefferson explains her presentation on “Accessing Transportation Barriers to Healthcare Access Using Analytics Hierarchy Process Modeling” to an attendee at the TRB Annual Meeting.



Student-to-Student Initiative

Several times throughout the year, CATM scholars reach out and interact with local community high school students to inform and educate them about the plentiful transportation educational and career paths available. The goal of the student-to-student initiative is to generate curiosity and interest in the transportation field and recruit participants for the Summer Transportation High School Institute by hearing positive experiences from peers not much older than themselves.



Kiana Williams, a sophomore supply chain management major, presented to the N.C. A&T STEM early college on Dec. 5, 2018. She spoke to a group of 50 high school juniors and seniors about the various educational paths available at N.C. A&T and the many career options in supply chain management. (left)



On March 15, Kayla Curry, Marvin Edge and Patrick Stanley, CATM scholarship students, talked to Dudley High School juniors and seniors in a Career and Technical Education class about the Summer High School Transportation Institute and various college transportation educational paths available. (left and below)



TRANSPORTATION AWARENESS DAY

Tuesday, April 9, 8 a.m. to 5:30 p.m.

at

BB&T Stadium

N.C. A&T State University

- Greensboro Transit Authority
- N.C. Department of Transportation
- Volvo Truck
- Joint School of Nanoscience and Nanoengineering
- N.C. A&T Department of Marketing and Supply Chain Management
- UNC-CH Highway Safety Research Center
- North Carolina Clean Transportation Initiatives
- N.C. A&T Department of Electrical Engineering
- Lime Bike Project
- N.C. A&T College of Engineering Auto Drive Project
- Cisco
- Professional pilots
- Institute of Transportation Engineers

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