

From D to A++: Transforming education in rural Louisiana

Dr. Chester Wilson

Louisiana Tech University

<i>Award Title:</i>	Consortium for Innovation in Manufacturing and Materials (CIMM)
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<i>Principal Investigator:</i>	Michael Khonsari
<i>Lead Institution Name:</i>	Louisiana State University
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<i>Award End Date:</i>	July 2020
<i>Highlight Submission Date:</i>	04/15/2019

What is the outcome or accomplishment? (1-2 short sentences describing it and why it is transformative; 50-word maximum suggested)*

CIMM researchers at Louisiana Tech University were instrumental in helping the previously D-ranked Huntington High School in Shreveport, Louisiana expand its magnet program to include an engineering component. Following this success, Dr. Chester Wilson and his team are now expanding the program by launching a new A++ Certification program. At the end of the course, students can take the A++ certification exam and follow a path to immediate employment or transfer the certification toward course credit at Bossier Parish Technical College.

What is the impact? (1-2 simple sentences describing the benefits for science, industry, society, the economy, national security, etc.; suggested 50-word maximum)

Huntington High School is serving as the pilot site for the A++ program, which may be extended to all area high schools as an elective. These engineering programs are preparing a pipeline of students to become the next innovators in engineering. The team of researchers are providing targeted mentoring to step students up into increasingly complex skills and offers a pathway to advanced degrees.

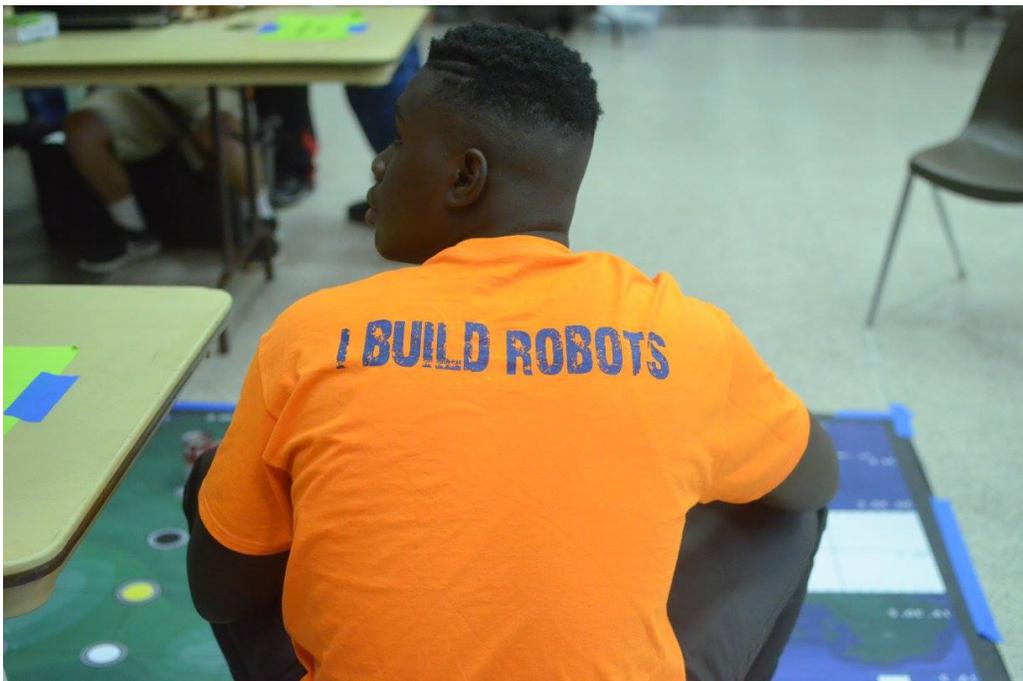
What explanation/background does the lay reader need to understand the significance of this outcome? (1-2 paragraphs that might include, for example, more on who, when, where; NSF's role; support from multiple directorates/offices; what makes this accomplishment unique; additional intellectual merits; or broader impacts such as education, outreach, or infrastructure improvement that are integral to this outcome; suggested 150-word maximum)

Dr. Chester Wilson and his team of researchers at Louisiana Tech University have developed a robust outreach program to prepare area youth to be the next generation of cyber and engineering professionals. The crown jewel of their program is a new Engineering Magnet program at Huntington High School in Shreveport, Louisiana. Huntington High School is an underserved

school in the Transformation Zone, where failing schools have been recombined and restructured. Though still in its first year of operation, the engineering and robotics classes offered through Huntington's magnet program are already filled. With just a few weeks of instruction, the robotics team competed in the Regional Autonomous Robotics Circuit (RARC) in Bossier City, Louisiana, and placed second.



Huntington High School engineering class students in Shreveport, Louisiana.



Huntington High School student at a Louisiana robotics competition.



Dr. Nicholas Groden teaching an A++ certification class in Shreveport, Louisiana.



Bossier Parish Community College A++ certification classroom in Bossier City, Louisiana.