

Understanding the Value of Informal STEM Programs for Diverse Youth: A Guide for Institutions of Higher Learning



Panelists

- ▶ Fan Wu, Tuskegee University: **Partnership to Provide Technology Experiences through Aerial Drones in High Schools of the Alabama Black Belt (Award #DRL-1614845)**
- ▶ Vikram Kapila, NYU Tandon School of Engineering: **Promoting Robotic Design and Entrepreneurship Experiences among Students and Teachers (Award # DRL-1614085)**
- ▶ James Diamond, Education Development Center, Inc. and Marc Lesser, Mouse: **Investigating Digital Badges as Alternative Credentials to Broaden STEM Participation Among Underrepresented Youth (Award # DRL-1614727)**

Questions to keep in mind

- ▶ If you are a faculty member, how could you make those at your institution who are involved in recruitment and admissions aware of your program and other programs like this?
- ▶ If you are involved in any part of the admissions or credit granting process, how can you imagine changes that would recognize the value of informal education programs?
- ▶ What can your project be doing to reach out to gatekeepers, such as faculty, admissions officers, other higher education administrators, to educate them about what students gain from such programs?



ITEST Drone Summer Academy

Award # DRL-1614845



PI: Hira Narang
Co-PIs: Mohammed Qazi, Cassandra Thomas, Jay Bhuyan, and Fan Wu

2018 STELAR ITEST PI & Evaluator Summit
Washington DC, May 14 – 15, 2018

TUSKEGEE UNIVERSITY

**ANDREW F. BRIMMER COLLEGE OF
BUSINESS AND INFORMATION SCIENCE**

COMPUTER SCIENCE DEPARTMENT



Tuskegee University

- Private and state-related HBCU
- Students
 - ❖ 3,156 from across U.S. and abroad
- Degree Programs
 - ❖ Baccalaureate: 40
 - ❖ Masters: 16
 - ❖ Doctorate: 4
- Demographic
 - ❖ More than 90% are African-American
 - ❖ 43% male and 57% female

Background Literature

- Research shows that HBCUs have a unique role to play in producing underrepresented minority STEM graduates. According to www.ed.gov
- “21 of the top 50 institutions for educating African-American graduates who go on to receive their doctorates in science and engineering, are HBCUs.”
- Only 3 percent of country’s colleges and universities are HBCU’s, but they produce 27 percent of African-American students with bachelor's degrees in STEM fields.

Issues Contributing to STEM Disparities

- Access to courses & quality rigorous curriculum
 - Rural County: No Calculus/pre-Calculus, Physics, Electives, Only 2.7% take SAT
- Teacher preparation
 - Rural County: 178 certified teachers and administrators. The faculty includes one counselor with National Board Certification. Only 46% holds a masters.
- Teacher availability
 - Rural County: In one school, 40% classes not taught by highly qualified teachers
- Infrastructure capacity
 - Access to wifi, computer labs with up to date software

ITEST Drone Summer Academy

- The goals of the Drone Academy project are:
 - ✓ Providing Alabama students and teachers from the rural Macon County School District and the urban Montgomery School district (ITEST Scholars) with technology-rich experiences through project-based learning.
 - ✓ Developing disciplinary-based knowledge and practices, critical thinking, reasoning skills, and communication skills needed for studies in STEM.
 - ✓ Using strengths of the ITEST partnership between Tuskegee University (TU) and TU's Computer Science Department Advisory Board (CSAB) and TU's Engineering Alumni Associate (TUEAA) to foster awareness among ITEST Scholars of the full spectrum of STEM-related occupations and to chart pathways for Scholars to these professions.
 - ✓ The Academy activities are designed to encourage Scholars to seriously reflect on the benefits of choosing educational pathways that will lead to STEM-related careers and occupations in an effort to increase the participation of women and minorities in the STEM-related workforce.

Project Impact

- **Successful Recruitment:** School principals and Superintendents of the two partnering districts also played a critical role in the recruitment process.
- **Teacher Lesson Plans:** Teachers developed lesson plans for infusion in their classrooms to extend the benefits of the Academy to other students.
- **Follow-Ups during the school year:** Classroom visits took place during the 2017-2018 school year to assist teachers in implementing the lesson plans that they developed.
- **Successfully Attracted the students who attended Drone Summer Academy to come to TU.**
- **University Administrations visited Drone Summer Academy and talked with the Drone Summer Academy Scholars.**

ITEST Drone Summer Academy

- The 2016 ITEST Drone Summer Academy
 - ✓ July 11- July 29, 2016
 - ✓ 42 high school students from rising 10, 11, and 12 grades.
 - ✓ 4 high school teachers.
 - ✓ One session.
 - ✓ Macon and Montgomery Counties
 - ✓ The majority of participants reported their race as Black or African American (83.3%) and there were more female students (57.1 %) than male students (42.9%). Students were from grades 10 (21.9%), 11 (43.8%) and 12 (34.4%) and the majority of students demonstrated that they were from Macon County (77.4%) and Montgomery School District (22.6%).

ITEST Drone Summer Academy

- The 2017 ITEST Drone Summer Academy
 - ✓ July 5- July 28, 2017
 - ✓ 68 high school students from rising 10, 11, and 12 grades.
 - ✓ 8 high school teachers.
 - ✓ Two Concurrent session.
 - ✓ Macon and Montgomery Counties
 - ✓ The majority of participants reported their race as Black or African American (92%) and there were more female students (56%) than male students (44%). Students were from grades 10 (30%), 11 (38%) and 12 (32%) and the majority of students demonstrated that they were from Macon County (52%) and Montgomery School District (43%).

<p>July 11</p> <ul style="list-style-type: none"> ● Orientation ● Problem solving ● ePortfolio setup ● Search engine ● Cloud computing 	<p>July 12</p> <ul style="list-style-type: none"> ● Cloud computing ● Problem solving ● YouTube ● Explore photo info ● Raspberry Pi ● Phishing 	<p>July 13</p> <ul style="list-style-type: none"> ● Collaboration ● Problem solving ● Google trends ● Intellectual property ● Turtle graphics ● ePortfolio update 	<p>July 14</p> <ul style="list-style-type: none"> ● Password I ● Turtle graphics ● Collaboration ● Turtle graphics ● Cyber security I ● ePortfolio update 	<p>July 15</p> <ul style="list-style-type: none"> ● Scratch ● STEM career ● Problem solving with Scratch ● ePortfolio update
<p>July 18</p> <ul style="list-style-type: none"> ● Drone safety ● Anatomy of a drone ● Install mobile app ● Fly drone ● Acquire data ● Analyze data ● ePortfolio update 	<p>July 19</p> <ul style="list-style-type: none"> ● Drone regulations ● Fly drone ● Acquire data ● Analyze data ● STEM career ● Fly drone ● ePortfolio update 	<p>July 20</p> <ul style="list-style-type: none"> ● Cyber security II ● Scratch ● Browser issues ● Scratch competition ● ePortfolio update 	<p>July 21</p> <ul style="list-style-type: none"> ● Teamsmanship ● Scratch extension ● Fly with Scratch (indoor testing) ● Fly with Scratch (outdoor testing) ● ePortfolio update 	<p>July 22</p> <ul style="list-style-type: none"> ● Fly with Scratch (outdoor discovery) ● STEM career ● Fly with Scratch (outdoor discovery) ● Summarize findings ● ePortfolio update
<p>July 25</p> <ul style="list-style-type: none"> ● Math & Science ● Fly drone ● Data analysis ● Data visualization ● ePortfolio update 	<p>July 26</p> <ul style="list-style-type: none"> ● Social media issues ● Fly drone ● STEM career ● Data analysis ● Data visualization ● ePortfolio update 	<p>July 27</p> <ul style="list-style-type: none"> ● Python ● Fly with Python ● ePortfolio update 	<p>July 28</p> <ul style="list-style-type: none"> ● Fly with Python ● Python ● Fly with Python ● ePortfolio update 	<p>July 29</p> <ul style="list-style-type: none"> ● Project completion ● Prepare presentation ● ePortfolio update ● Post-assessment

ITEST Drone Summer Academy



ITEST Drone Summer Academy

- <https://www.youtube.com/watch?v=UrOcF0trGhc>
- <https://www.youtube.com/watch?v=tRcuO0yBJyo&feature=youtu.be>
- <https://www.youtube.com/watch?v=yfip89a9DD4>
- https://www.tuskegee.edu/programs-courses/colleges-schools/cbis/computer-science/itest_drone_academy



TUSKEGEE

UNIVERSITY

1881

Thank You !

COLLEGE OF BUSINESS AND INFORMATION SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

Recognizing the Value of K-12 STEM Partnerships

Vikram Kapila

**Mechatronics, Controls, and Robotics Lab
(MCRL)**

<http://engineering.nyu.edu/mechatronics/>

<http://engineering.nyu.edu/mechatronics/ITEST/index.html>

NSF ITEST DRL: 1614085

ITEST PI Meeting

May 15, 2018, 10:15—11:45 AM



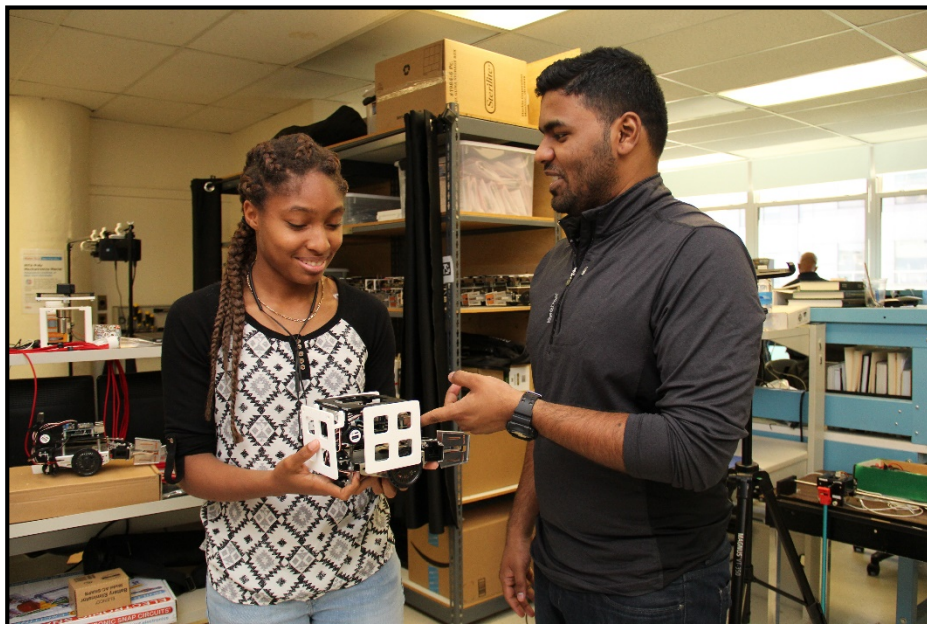
K-12/NYU Tandon STEM Partnership

- Creates opportunities to
 - Engage K-12 participants in engineering education and research
 - Create pipeline of future STEM scholars
 - Make broad societal impact
- Lab researchers mentor and interact with K-12 students
 - Learn to communicate without technical jargon
 - Broaden their own education and training
 - Receive financial support for participation and contribution
- Faculty can develop research proposal with authentic broader impact statements
- Explore new educational and research programming

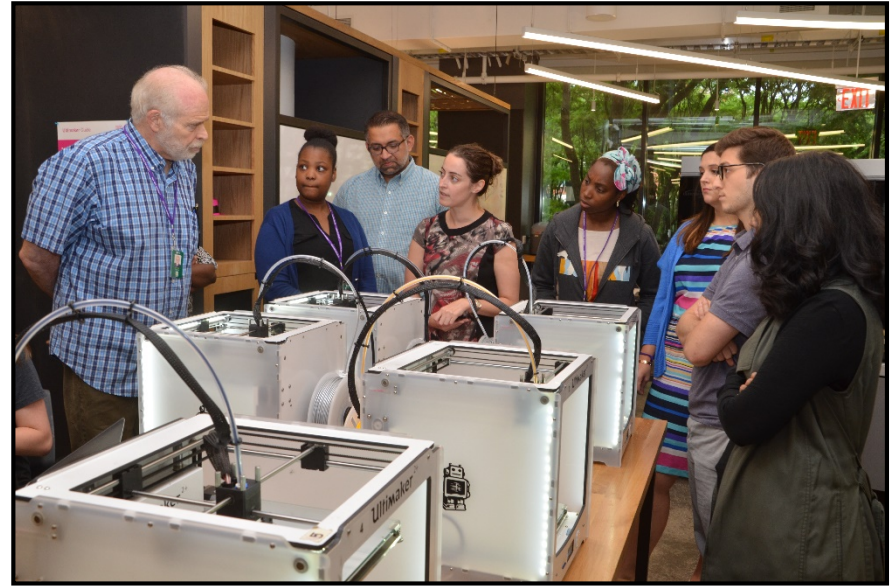
K-12 STEM Education at NYU Tandon

- RET Site – NSF
- GK-12 Fellows – NSF
- DR K-12 – NSF
- **ITEST** – NSF
- NYS and NYC funded projects
- CBSI – Philanthropy
- ARISE – Philanthropy
- SoSC – Philanthropy
- CSAW – Philanthropy
- ∴

Research Immersion for K-12 Participants



Summer of STEM @ NYU Tandon



Industry Interactions



Industry Interactions

DOE Home Page > Offices & Programs > Media Relations > News and Speeches > 2014-2015

News and Speeches

Chancellor, Microsoft, and NYU Polytechnic Announce NYC Summer STEM 2015

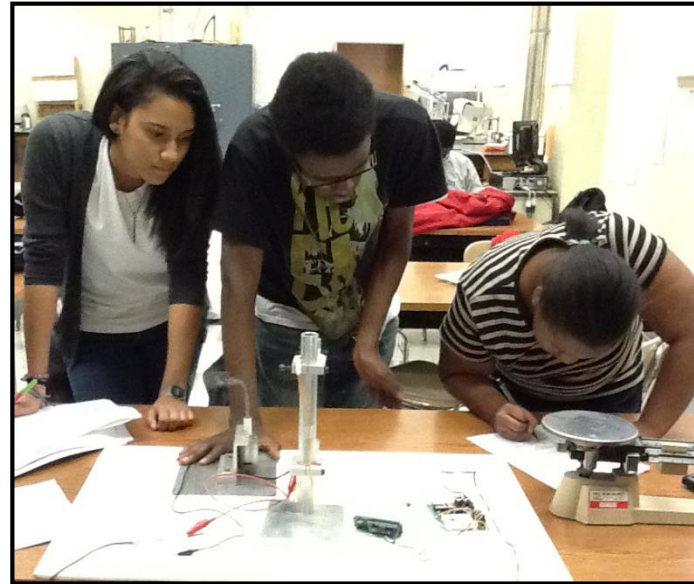
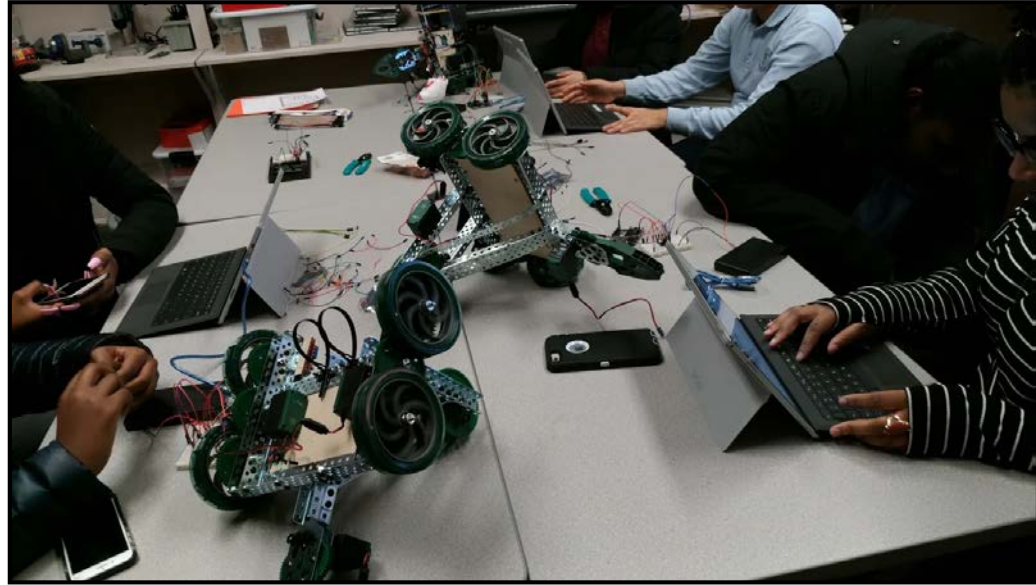
5/7/2015

Pilot Program Will Provide Hands-On STEM Opportunities for 1,200 Students

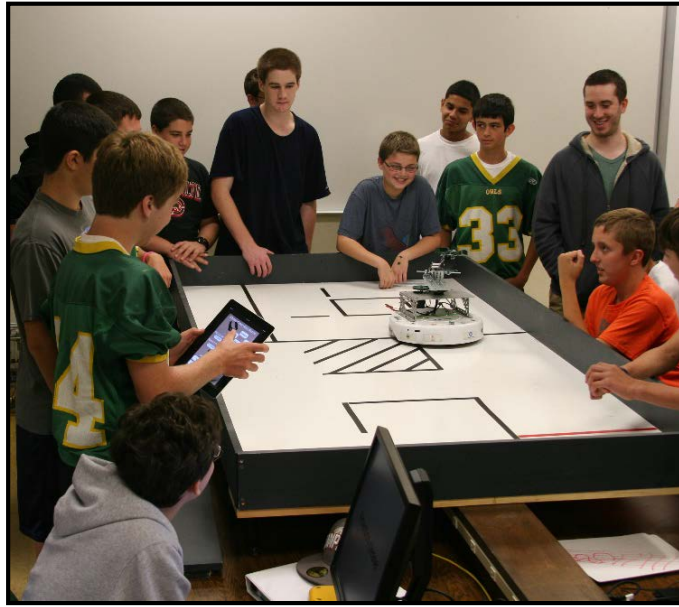
Microsoft Leading Supporter of Design and Implementation of Program

The screenshot shows the Chalkbeat website interface. At the top left is the Chalkbeat logo with the tagline "Education news. In context." To the right is a "Mark Your Calendar" button with a calendar icon and a "CHALKBEAT EVENTS" button. Below these are navigation links for "Locations", "Topics", "Connect", and "About Us". On the right side of the header are buttons for "NEWSLETTERS" and "DONATE", along with social media icons for Facebook, Twitter, and a search icon. The main content area features a blue square icon with the text "FOCUS ON STEM". The article title is "City offers new STEM summer program to hundreds of students". Below the title is the byline "BY STEPHANIE BNYDER - MAY 7, 2015". The article image shows a woman in a pink beanie and glasses leaning over a table, working with several children who are wearing white lab coats. They are engaged in a hands-on activity with large blue and purple bowls and various tools. A small photo credit "PHOTO: Stephanie Snyder" is visible in the bottom right corner of the image.

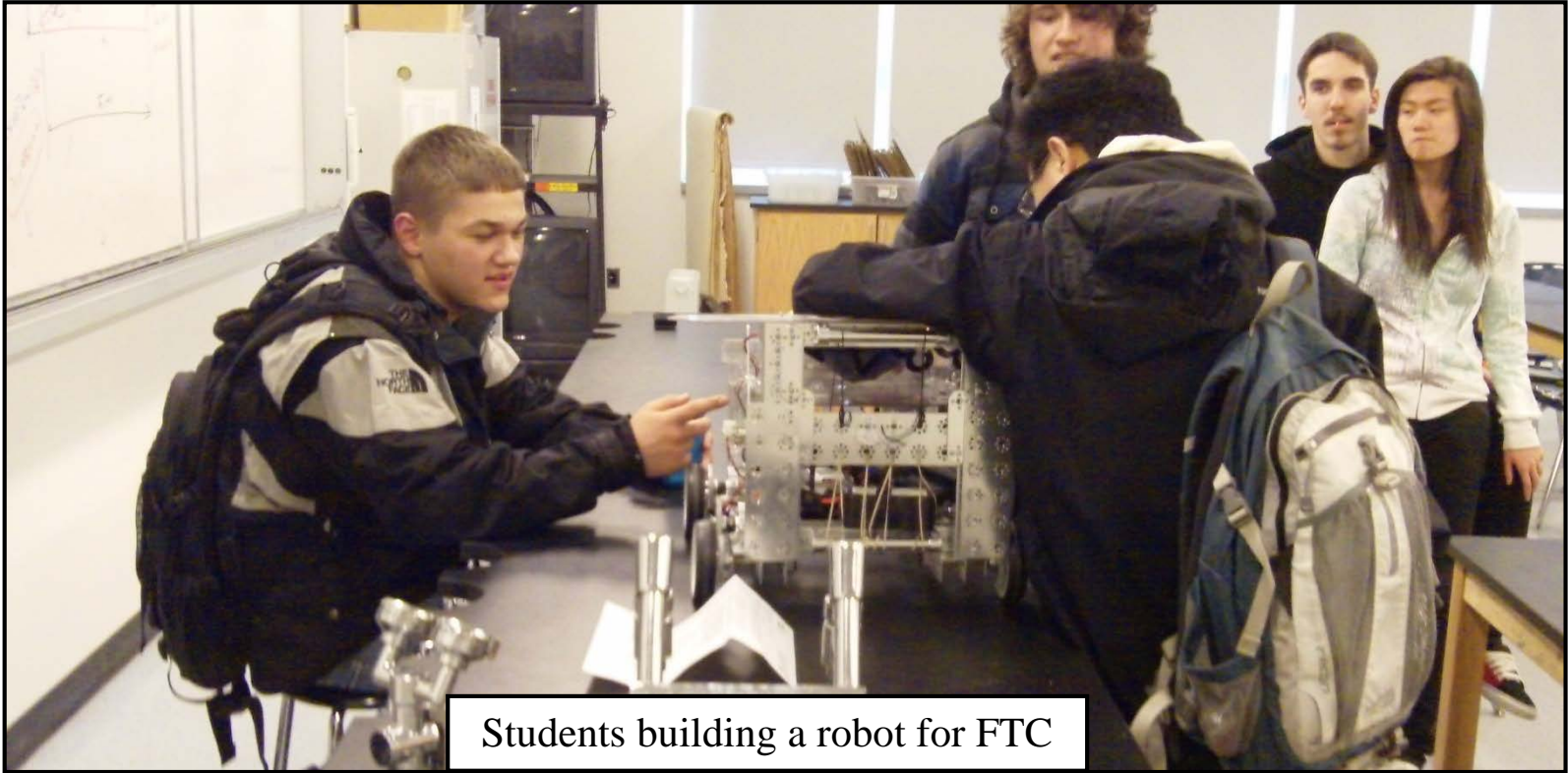
Classroom Integration of Summer Learning



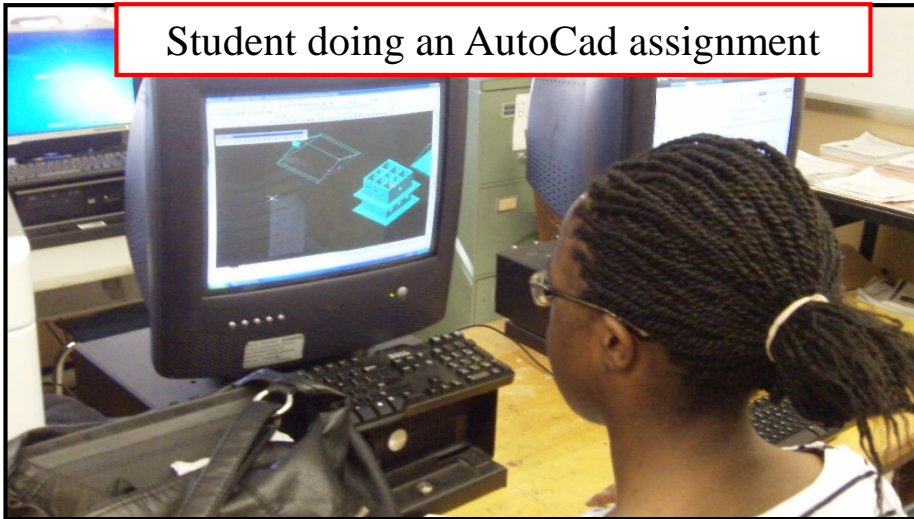
AY Interactions: Schools and NYU Tandon



Midwood HS: Pre-Engineering in Action



Students building a robot for FTC



Student doing an AutoCad assignment

Midwood High School won the city championship in robotics last year. That was totally due to our engineering program which would not exist without the four teachers who participated in NYU-Poly's SMART program.—Dr. Ernest Pysher, AP, 2011

Impact on Engineering Students

- Improved communication skills
 - Presenting to “non-science” audiences
 - Significant gain in Fellows’ ability to communicate complex STEM concepts to lay audiences (mean pre-score 2.75/4 v/s post-score 3.23/4)
- Highlight the importance of STEM to society
- Ability to influence students
 - Share knowledge
 - Generate enthusiasm for STEM
 - Academic achievement
 - Dispel stereotypes
 - Correct attitudes
 - Creativity of students

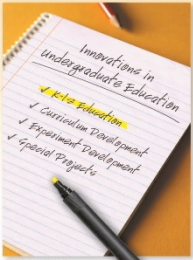


Scholarship on K-12 STEM Activities

FEATURE

Science and Mechatronics-Aided Research for Teachers

The "SMART" program provides teachers with training and workshops



... shortage of fully prepared teachers as well as outdated and uninspired curriculum content. The SMART program provides teachers with training and workshops to address these issues. The SMART program is funded by the National Science Foundation (NSF) and the Department of Education (DOE). The SMART program provides teachers with training and workshops to address these issues. The SMART program is funded by the National Science Foundation (NSF) and the Department of Education (DOE).

By Vikram Kapila and Sang-Hoon Lee
IEEE Control Systems Magazine

Advances in Engineering Education

Enriching K-12 Science and Mathematics Education Using LEGO

ABSTRACT

Keywords: LEGO, K-12, Science, Mathematics, Education

Mechatronics

... fit with a smart phone

... fit with a smart phone

Coarchitectural engineering in US elementary schools

... Coarchitectural engineering in US elementary schools

... Outreach to K-12 Teachers: Workshop in Instrumentation

... Outreach to K-12 Teachers: Workshop in Instrumentation

... and Computerized Data

... and Computerized Data

... Improvement by Using Instrumentation in High School

... Improvement by Using Instrumentation in High School

Soil Mechanics and Engineering Design Process

- Soil permeability
- Shallow and deep foundations
- Erosion in rivers
- Use EDP: ask, imagine, plan, create, and improve

Delivering Geotechnical Engineering to Elementary School Children

*By Eduardo Suescun-Florez, Maged Iskander, Ph.D., P.E., F.ASCE,
Ryan Cain, and Vikram Kapila, Ph.D.*



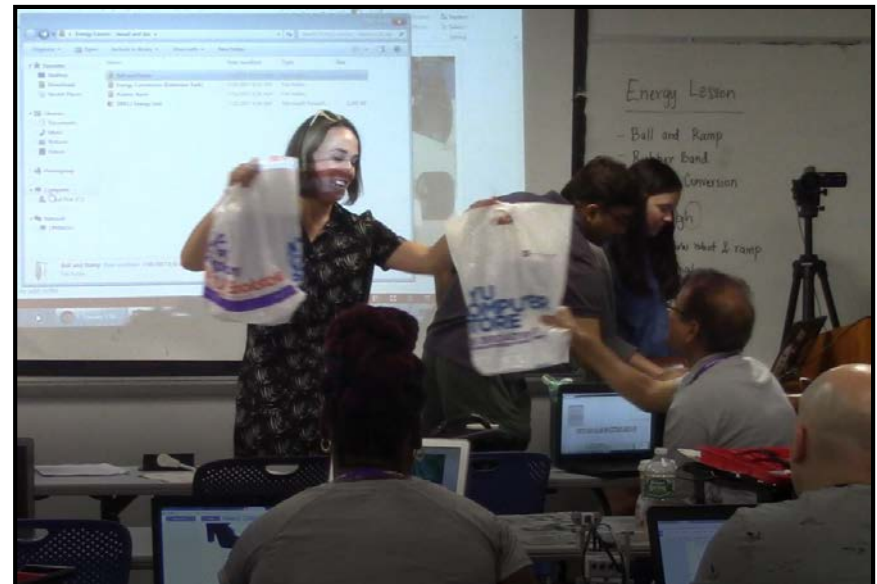
Celebrate K-12 STEM



Celebrate K-12 STEM



Engage and Partner with Admissions



Engage and Partner with Marketing and Media

NYU-Poly Mentoring Helps Take Brooklyn Robotics Team to World Finals

Published March 28th, 2011



170th students celebrate being part of the alliance of three teams that won the ultimate FIRST Tech Challenge. Photo by Adriane Grossman



Brooklyn Robots Travel to D.C., Teach Math and Science

By Mary Frost



NYU-Poly's 'Mechatronics Mania' Exhibits at Expo

By Mary Frost
Brooklyn Daily Eagle

BROOKLYN — This past weekend the National Mall in Washington, D.C., was packed with hundreds of thousands of visitors taking in the latest generation of cyber technology, virtual reality and interactive robots at the first-ever USA Science and Engineering Festival Expo.

And right up front were a handful of little robots from Brooklyn, in the "Mechatronics Mania" exhibit by Brooklyn's Polytechnic Institute of New York University (NYU-Poly). The university was one of only 15 or so organizations chosen by the National Science Foundation to exhibit there.

Led by Vikram Kapila, professor of mechanical engineering and one of the founders of NYU-Poly's robotics and mechatronics outreach program, graduate students demonstrated how they use the robots to raise students' math and science grades and skills in Brooklyn's economically disadvantaged neighborhoods.

Using robots to help raise student grades

Monday, March 21, 2011



Jennifer Haghpanah
NYU-POLY GRAD STUDENT



March 11, 2011, 1:30 pm

P.S. 11 Students, Robots, Compete in Lego League

By MICHAEL RANDAZZO, Community Contributor

NYU P.S. 11 wins big during the FIRST LEGO League robot competition qualifier this January.



The atmosphere at the First Lego League robot competition qualifier in January felt similar to a WrestleMania match — except the gladiators in question were Lego robots created by hundreds of Brooklyn elementary school students. This year, P.S. 11's Robotics Team, Mission 11, captured the first place award at that contest, which was held at the NYU-Poly's Jacobs Academic Building. On Sunday, Mission 11 will take part in the final round of the New York City regional competition at the Jacob Javits Center.

NYU-Poly Celebrates Engineers Week on NBC Today Show

On February 20, 2011, more than 3.8 million viewers tuned into the Sunday NBC Today Show to see Rockefeller Plaza filled with robots and signs proclaiming, NYU-Poly Celebrates Engineers Week. Our team included over 50 members (including the 31, 30+ students, two Fellows, 5 teachers from 4 schools, parents, members of NYU-Poly's media and development office, and a staff member of the Brooklyn Community Foundation, the founding sponsor of CBRI). The team carried signs acknowledging our various sponsors, including the National Science Foundation, Janice Huff, NBC weather reporter, interviewed project teacher Ms. Tanya Wardaly and a student.



Robots Teach; More Brooklyn Kids Learn

Brooklyn Community Foundation Grant Expands Highly Successful NYU-Poly Robotics Outreach Program

Two Brooklyn institutions today announced an expanded partnership to help encourage Brooklyn's young people to explore careers in the fields of science, technology, engineering and mathematics (STEM). Brooklyn Community Foundation's \$500,000 grant to Polytechnic Institute of New York University (NYU-Poly) could triple the number of under-resourced Central Brooklyn elementary, middle and high schools that employ students' fascination with robots to engage their interest in STEM subjects.



Sparking Interest in Math and Science Among At-Risk Students, One Robot at a Time

BLACK MALE DONOR COLLABORATIVE JOINS NYU-POLY TO EXPAND SUCCESSFUL BROOKLYN SCHOOLS PROGRAM

Published September 08, 2010



From left, BMDC Program Coordinator Anthony Simmons, NYU-Poly Professor of Mechanical Engineering and CBRI Principal Investigator Vikram Kapila, Bedford Academy and CBRI graduate Khalid Funch, who has been accepted into a college-computer science program; GS 333 (Bushwick) Robotics Teacher Lindrick Oulerbridge, a three-year CBRI participant; and BMDC Director Nicole Sharpe.



Brooklyn Schoolkids Do the Robot

By MELANIE GRAYCE WEST

What happens when you mix young engineers, teachers, students and robots in a Brooklyn classroom?



"A whole bunch of magic," says Marilyn Gelber, president of the Brooklyn Community Foundation. The foundation is giving a \$500,000 grant to expand a program that invites engineering students into serve as mentors in Brooklyn schools. The program, Central Brooklyn Science Technology Engineering and Mathematics (STEM) initiative, is operated by the Polytechnic Institute of New York University.

The after-school initiative, launched in 2007, now operates in 18 schools, grades five to nine. With the foundation's grant and with additional funding from outside donors, the program hopes to be in 36 schools in three years. To date, the Brooklyn Community Foundation has given \$800,000 to the STEM initiative.

MECHATRONICS MANIA

NATIONAL SCIENCE FOUNDATION SELECTS NYU-POLY'S GROUND-BREAKING ROBOTICS PROGRAM FOR PRESTIGIOUS WASHINGTON, D.C., EXPO



From left: Philip Li, chief operating officer, Brooklyn Community Foundation and Professor Kapila; and Nicole Sharpe, director, Black Male Donor Collaborative and President Hultin.

FIRST Lego League Challenge, News12 Brooklyn



Certificate of Excellence

Presented to

Dr. Vikram Kapila



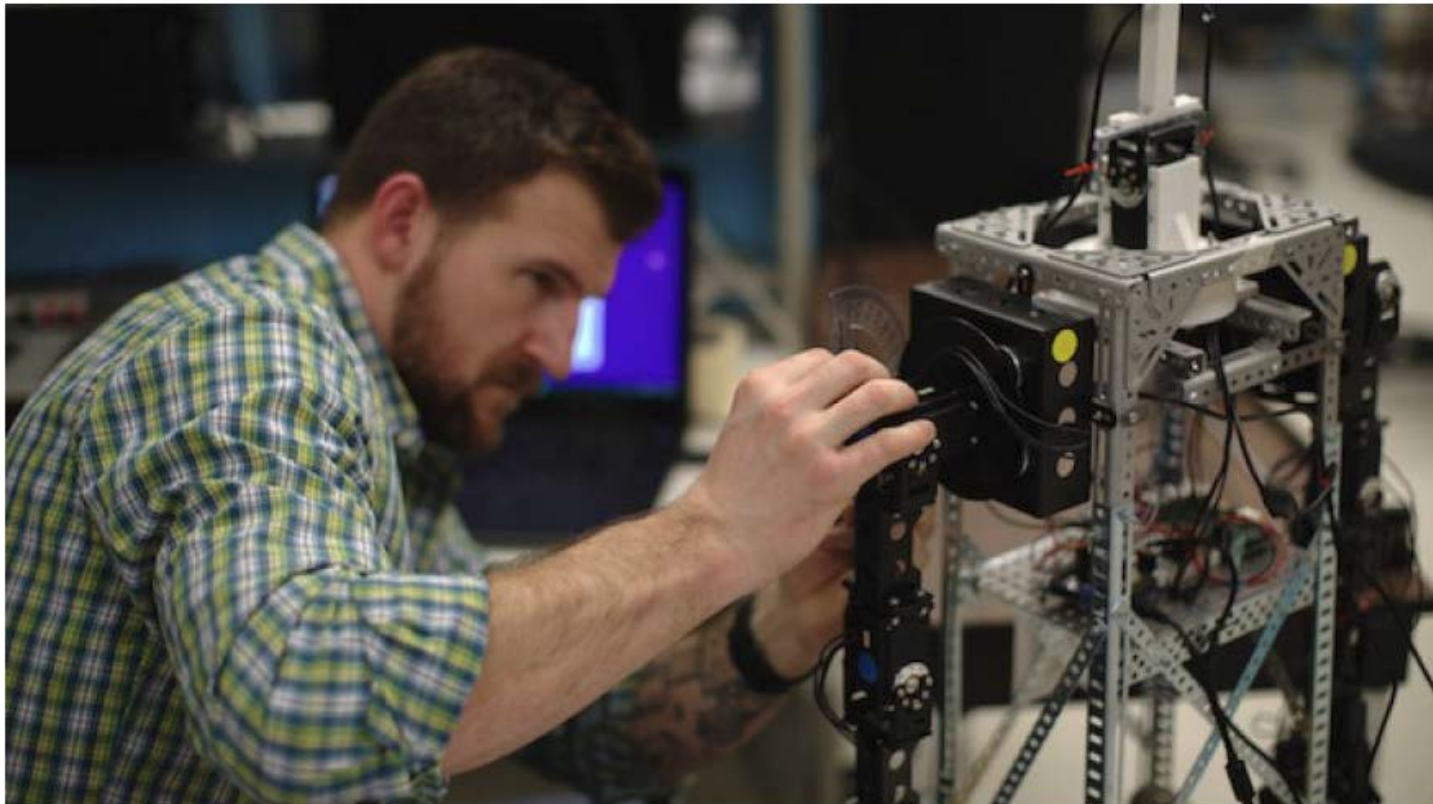
*In recognition of a longstanding partnership and commitment to the students of
New York City's Career and Technical Education Programs and Schools
February 29, 2016*

Division of Teaching and Learning
Office of Postsecondary Readiness
New York City Department of Education

Brooklyn's hot new trend: robots

A new grad program on the frontier of innovation is changing how we work and live.

By Alizah Salario Published : February 15, 2016



Matthew Moorhead works on CAESAR (Cellularly Accessible, Expressive, Semi-Autonomous) NYU: Sheldon Smith

A forum for emerging systems and control technologies.

DYNAMIC SYSTEMS & CONTROL

MARCH 2018 VOL. 6 NO. 1

MECHATRONICS EDUCATION INNOVATION WORKSHOP: A SUMMARY REPORT

The Internet of Things, robotics, and smart systems are beginning to make demands on academic programs to deliver a more modern and complete treatment of the necessary skills, methodologies, and technologies to meet the requirements of industry. Mechatronics, with its inherent interdisciplinary character, offers a vehicle to address these challenges and opportunities. Mechatronics education programs can

BY VIKRAM KAPILA
NYU TANDON
PROFESSOR OF MECHANICAL
AND AEROSPACE ENGINEERING
TOM LEE
QUANSER
CHIEF BUSINESS
DEVELOPMENT OFFICER



Sustainability and Institutionalization

- Broaden project: Serve additional constituencies
- Ensure longevity: new funds, hone sustainable elements (courses)
- Spur institutional change: integrate across academic activities, develop leadership strategies, invite tenure-track faculty participation, engage university administrators
- A multifaceted approach: Involve faculty, students, administrators, K-12 community, civic leaders, media, philanthropies
- Institutional commitment: Center for K-12 STEM Education
 - Cyber security
 - Science of Smart Cities
 - ARISE—Summer research for high school students
 - Local and international projects





DreamYard

THE NEW SCHOOL
PARSONS



Investigating Digital Badges as Alternative Credentials to Broaden STEM Participation Among Underrepresented Youth, Award #1614727 (Project dates: 09/2016–08/2019)

Jim Diamond (EDC), PI: jdiamond@edc.org

Marc Lesser (Mouse), Co-PI: marc@mouse.org

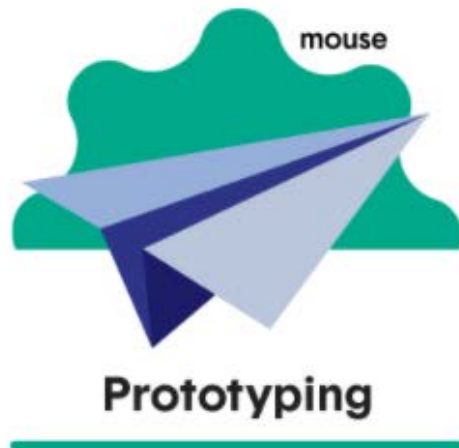
Research Questions

1. How does the process of building accredited alternative credential portfolios contribute to the development of STEAM identities among underserved and underrepresented youth?
2. In what ways do individual and institutional stakeholders come to agreement to recognize mutual value in and accredit alternative credential portfolios?

mouse_

design league





Mouse Competency Badges

Mouse competency badges are awarded to learners who have demonstrated their grasp of skills and knowledge through project evidence reviewed by local educators.



Badge: Brainstorm: Finding great Ideas

Awarded for demonstrating understanding of key aspects of design ideation, producing and iterating on ideas derived from design research. Mouse competency badges are awarded to youth who have demonstrated their grasp of skills and knowledge through project evidence reviewed by local educators.

Mouse supports the growing capacity of youth to apply technology, engineering, and design skills toward solutions that effect social change.

Project: Rules of Brainstorming

Practice the professional process of brainstorming once your research and problem identification are complete.

Evidence Date: 09/20/2016

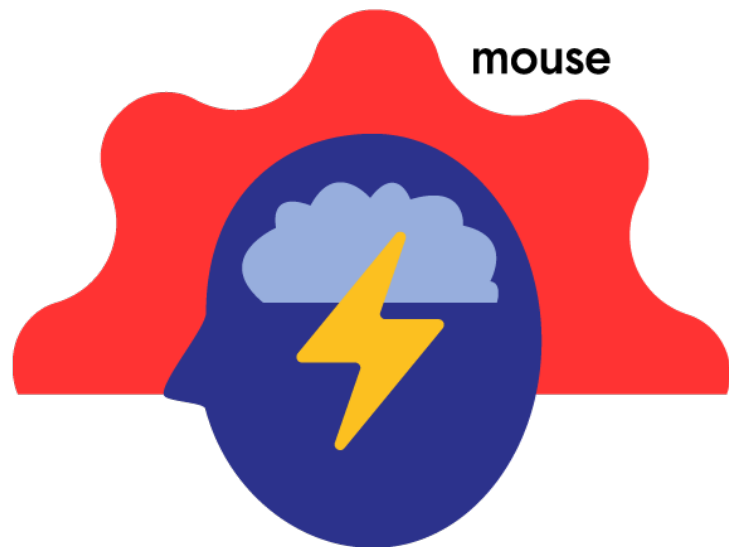
- Work Submitted: 09/20/2016 15:57 pm



mouse_

Project: Framing Questions

Learn how to frame your design challenges with How Might We Questions in order to achieve the most from brainstorm.



Brainstorm



design league

Mouse Design League

Mouse Design League is....

[BADGE ENDORSEMENTS](#) [LIKES](#) [ARCHIVE](#)

Mouse Design League Parsons Badge Endorsement



This Mouse Design League Badge is formally endorsed by Parsons School for Design. In this context, *badge endorsement* is the action of having expert individuals or institutions formally recognize or value the achievements of learners participating in learning experiences outside of their own institution. The purpose of this endorsement is to pronounce relationships between organizations with shared goals related to skills-building and to establish more explicit learning pathways for individuals who seek expertise applicable to their personal or professional interests.

A "Badge," in this context, is a graphic representation of a skill or competency that is accessed online, earned through a specific criteria, and that links to "evidence" or portfolio data that can be reviewed by various stakeholders.

Mouse
Credly member since August 2016

Account Usage
1 Credit Earned, 0 Credit Given, 0 Saved in Lists, 1 Tracked by

Settings
VIEW PROFILE
ACCOUNT SETTINGS
OUR CREDIT
CONTACTS & LISTS
FOLLOWING
VERIFICATION

Badge Details
Title: HTML & CSS: Code for the web
Description: Awarded for demonstrating an understanding of HTML & CSS syntax by writing and setting common tags and properties in both languages.
Criteria: This individual has participated in lessons and group projects that demonstrate their understanding of core skills in this competency.
Issuers can:
- Recognize, write and edit introductory HTML and CSS code
- Use HTML tags to embed images, create links, and format text & lists
- Edit CSS styles to change the look & feel of a web page
- Identify & resolve syntax errors
Issue Date: 08/09/16
Expiration: Never
Evidence: [View evidence](#)

Issuer Details
Issuer: Mouse
Endorsement: Parsons School for Design
WORK ENDORSED

You are currently masquerading as Mouse. [Return Home](#) [Issuer Details](#)

THE NEW SCHOOL

PARSONS

Why does higher ed need to partner with community organizations?

High-quality out-of-school programs can give young people occasions to engage in authentic practices that relate to their own interests, are meaningful to their peers, and are within their cultural milieu (Bell, Lewenstein, Shouse, & Feder, 2009). Underrepresented youth do not necessarily have the means to convert those experiences into “currency” for use in the college admissions process, as do middle-class students, who typically possess greater social capital (Archer, et al., 2012).



**We are
challenging
the general
notion of
what a
portfolio
can be.**

~~Linear Narrative~~

Interactive

~~Final Work~~

In progress

~~Solely Visual Art~~

Multidisciplinary

~~Static~~

Easily Sharable

MOU

Shared Goals
Key Dates
People
Endorsement Details

Admissions Events



Pre-College Mentorship



Network of
Higher Education
Partners
With Similar Goals

Admissions
Protocol



Annual Youth
Conference

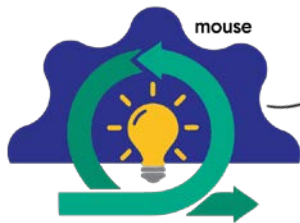


Endorsement

THE NEW SCHOOL
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WORK ENDORSED

Curriculum Alignment

PARSONS



Iteration

Demonstrate an understanding of the iterative and incremental making process, including experimenting, taking creative risks, developing concepts and scenarios; drafting, mocking up, and prototyping; testing; and editing, altering, and responding to feedback.

Awarded for showing competence in testing versions of a design using prototypes, and documenting feedback from real users.

Growing the alternative credentials herd

1. Faculty as advocates (the Justice League)
2. Faculty and admissions brainstorming together (EAGER)



DreamYard

THE NEW SCHOOL
PARSONS



Thank you! Questions? Get in touch!



Investigating Digital Badges as Alternative Credentials to Broaden STEM Participation Among Underrepresented Youth, **award #1614727**

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