



THE FUTURE IS ...

N.E.A.R.

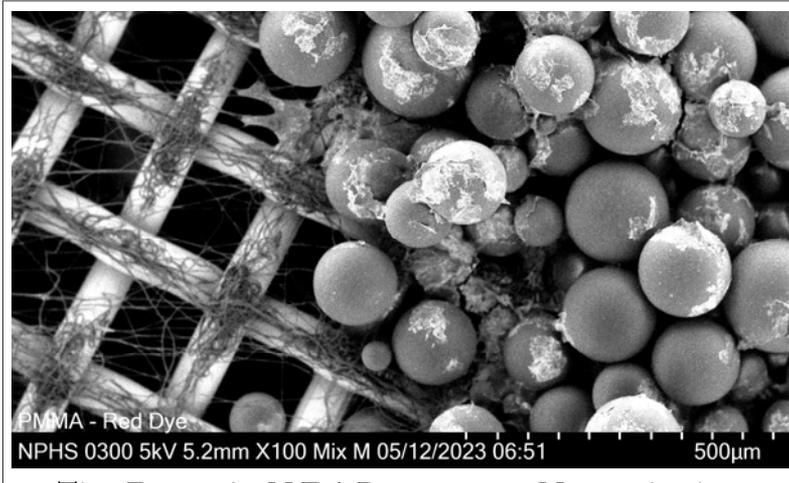
NANOTECHNOLOGY EDUCATION AND RESEARCH

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NP Technology & Engineering
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PLTW



The Future is N.E.A.R. program (Nanotechnology Education and Research) at North Penn is a custom designed STEM education endeavor engaging senior Engineering Academy students in the exciting world of nanotechnology, experimental design, and engineering research.

Students work in design teams to research and develop solutions to global challenges by capitalizing from the fundamentals of materials science, engineering, and nanotechnology while utilizing a combination of their own creativity coupled with some of the latest published research available.

The N.E.A.R. program is woven into the Engineering Design and Development course of the Project Lead the Way program here at North Penn. It offers our students an opportunity to gain essential 21st century skills that prepare them to become successful leaders in a global technological society.

FRIDAY, MAY 19TH, 2023

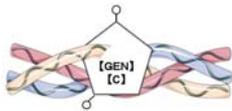
NORTH PENN HIGH SCHOOL AUDITORIUM

SEVEN O'CLOCK P.M.

2022 - 2023 Engineering Design and Development Nanotechnology & Engineering Research Teams

Welcome to the 18th annual North Penn High School Engineering Academy Nanotechnology and Engineering Symposium!

The evening will begin at 7:00pm in the auditorium with introductions to research from each of the teams. The students will bring you up to date with the research endeavors they have been performing throughout this school year. Following their presentations, the evening will continue in the auxiliary gymnasium where the students will offer poster presentations, interactive demonstrations of their research, and much more...



Gen C

Jadyn Anthony Manning
Marianne Mathew
Noshin Nowar Sinthi



Solar+

Jonathan Minsung Kim
Cameron Alexander Pelletier
Kevin Michael Pownall Jr.



Solergy

Jay K. Charangat
Ryan T. Gasper
Joseph Yi



Rheo-Tech

Jack Harper Ely
Amir Fairweather
Charlotte Rose Jaffe



MicroPlastics Solutions

Sophia M. Lynn
Emelia M. Jones



STORE-E

Logan Robert Giza
David K. N. Lu
Leo Rowan Smith
Agnes R. Walker



TBI-Tech

Xavier Bryan-Boothe
Dayshia Lewis-Upchurch

2022 - 2023 Engineering Design and Development Nanotechnology & Engineering Research Teams



Xavier Bryan-Boothe TBI-Tech

Xavier will be attending Temple University and will be majoring in Mechanical Engineering. During his three years at North Penn High School, he has completed 6 classes in the engineering academy and is a 3 year letter winner for football and track & field. He is a 2x state runner up in high jump and will continue playing football at Temple.



Jay K. Charangat Solergy

Jay will be attending University of Maryland in the College of Computer, Mathematical and Natural Sciences to major in Computer Science. He has taken four courses in the Engineering Academy and is part of the EPICS club. He is also involved in other activities such as SALSA Club, ENACT Club, and spends his time working at Chipotle where he has been working at for almost a year.



Jack Harper Ely Rheo-Tech

Jack will be attending the University of Colorado, Boulder, aspiring to major in Aerospace Engineering. Jack has completed five courses in the Engineering Academy. He has been a three year member of both the North Penn Bards Choir and the North Penn Chamber Singers. Jack has also achieved his Eagle Scout Rank with Troop 51, Hatfield, completing his Eagle Scout project at Fischer's Park.



Amir Fairweather Rheo-Tech

Amir will be attending York College of Pennsylvania to major in mechanical engineering. He has completed five courses within the North Penn Engineering Academy. Amir is a member of the Auto Club and International Research Team.



Ryan T. Gasper Solergy

Ryan will be attending Pennsylvania State University in pursuit of Engineering. He has taken 4 courses in the Engineering Academy and is a member of the Key Club and EPICS club. He spends his time playing basketball and working at Ritas where he has been working for over two years. He is a TYA Champ and All Star. Throughout college, Ryan hopes to become an entrepreneur while studying engineering.



Logan Robert Giza STORE-E

Logan will be attending Montgomery County Community College to major in Electrical Engineering. He has completed four courses within the North Penn Engineering Academy. By completing these courses, Logan has been inspired to pursue an engineering degree.

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Charlotte Rose Jaffe Rheo-Tech

Charlotte will be attending Lehigh University this fall and will be majoring in Material Science Engineering. During her three years in the engineering academy, Charlotte completed 5 classes, was a member of the EPICS Club, and conducted a personal research project during morning lab sessions. She has also been involved in the Key Club (Secretary), German Club (Historian), marching band (Section Leader), pit band, Wind Ensemble, and Navy Jazz Band.



Emelia M. Jones MicroPlastics Solutions

Emelia will be attending the University of Pittsburgh in the Swanson School of Engineering and will be majoring in Civil Engineering. She has completed four courses in the Engineering Academy. She was Secretary of the Women in Engineering Club her Junior year and member of the International Research Team during in her Senior year.



Jonathan Minsung Kim Solar+

Jonathan will be pursuing an aerospace engineering degree at Florida Institute of Technology. He has been an avid participant in the Engineering Academy courses and is the treasurer of the E.P.I.C.S club, photographer and communications officer of M.A.C, and a member of the International Research Team. Furthermore, Jonathan was on the football team for two years and a senior participant of the Ultimate Frisbee and Paintball Clubs.



Dayshia Lewis-Upchurch TBI-Tech

Dayshia will be attending Montgomery County Community College to major in Accounting. She has completed five courses within the North Penn Engineering Academy. She is a member of The African American Awareness Club as well as the North Penn Girls Flag Football Team. She likes to draw, play piano, and listen to music.



David K. N. Lu STORE-E

David will pursuing a degree in computer engineering at Drexel University. He has completed four courses in the Engineering Academy. He is the treasurer for the Model Aviation Club and member of the International Research Team. He also works at J.L Freed Honda and Joseph Ambler Inn.



Sophia M. Lynn MicroPlastics Solutions

Sophia will be attending Belmont University in Nashville, Tennessee. She plans to double major in Audio Engineering Technology and Engineering Physics, with a minor in Architecture, and has been accepted into the Belmont Global Honors College, which involves an accelerated curriculum including a semester studying abroad. She completed four Engineering Academy courses and does career study work with the Choral Head & Director, Mr. Klenk. Throughout college, Sophia hopes to continue working at a Nashville local favorite guitar shop, Fanny's House of Music, and playing gigs throughout the town.

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Jadyn Anthony Manning Gen C

Jadyn plans to attend Widener University to major in mechanical engineering. He has been a part of the engineering academy for three years and has completed five engineering courses. Jadyn has also been on North Penn's swim team through all four years of high school.



Marianne Mathew Gen C

Marianne will be attending Vanderbilt University to study Engineering. She has taken five engineering courses, is the President of Math Honor Society, a member of the girl's tennis team, and participates in many other academic and community service clubs, including Amnesty International, Science Olympiad, and International Research Team, as well as participating at her church. She enjoys drawing, listening to music, and playing the guitar and bass.



Cameron Alexander Pelletier Solar+

Cameron will be attending Widener University to earn a degree in mechanical engineering. Cameron has completed four courses in the engineering academy. He played on the North Penn Soccer team and is a three year letter winner. He has also been a two year member in North Penn Wind Ensemble, North Penn Chamber Singers, and North Penn Bards.



Kevin Michael Pownall Jr. Solar+

Kevin will be attending Penn State to study Civil Engineering. He completed four courses within the North Penn Engineering Academy. Kevin is a captain of the football team along with a three year letter winner. He runs a fishing team located on the upper Chesapeake Bay where he fishes tournaments and hopes to continue fishing in the Bass Master Collegiate series with the Penn State Bass Fishing Club.



Noshin Nowar Sinthi Gen C

Sinthi will be attending Drexel University to study Biomedical Engineering. She has taken six courses within the Engineering Academy. She is the Vice President of the Art Club, on the Badminton Council, the Girls Mist ambassador of the Muslim Student Association, International Research Team, and Key club. She likes to paint, write poetry and is published in the book Upon Arrival hourglass edition by Eber and Wein Publishing.



Leo Rowan Smith STORE-E

Leo plans to attend the University of Hawai'i at Hilo, and will likely be majoring in an, as of yet undecided, STEM field. He has completed six courses in the Engineering Academy. In 10th grade, he was part of the Academic Decathlon team and has a proclivity and fondness towards microscopy.

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Agnes R. Walker STORE-E

Agnes will be attending Lehigh University in the P.C. Rossin College of Engineering majoring in mechanical engineering. She has completed four courses in the Engineering Academy, is the president of the E.P.I.C.S club and a member of the International Research Team. Agnes was also in the Marching Knights for four years, becoming the Percussion Captain in her last year, and Winter Percussion for three years.



Joseph Yi Solergy

Joseph will be attending Drexel University and majoring in computer engineering. During his three years at North Penn, he has completed a total of six courses in the Engineering Academy. He was also member of Model Aviation Club and ENACT Club in his junior year and a member of E.P.I.C.S. Club and International Research Team during his senior year.

A c k n o w l e d g e m e n t s

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“A vision without resources is just a hallucination..”

Dr. Joseph DeSimone, 2008 Lemelson –MIT Prize Recipient

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**THANK YOU FOR
GIVING VISION TO
OUR RESEARCH
ENDEAVORS!!!**

Lori Harvey | Senior Manager, STEM Outreach Hitachi High-Tech America

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To learn more, please visit their website at:
www.InspireSTEMeducation.us



**THANK YOU NORTH PENN
EDUCATIONAL FOUNDATION
FOR YOUR SUPPORT!**

**WE COULDN'T DO IT
WITHOUT YOU!!!**

The North Penn School District Educational Foundation, a 501c (3) corporation, is a collaborative effort among individuals committed to enriching the education and lives of more than 13,000 students in each of the North Penn School District's (NPSD) 18 schools, every single day.

Often referred to as "the Foundation," **our mission** is to **motivate and inspire students and staff** in the North Penn School District through **innovative projects and opportunities** that **enhance educational experiences and resources**.

To learn more about the foundation or to help, please visit their website at:
www.npennedfoundation.org

Auxiliary Gymnasium Poster Session and Demonstrations

