

February 27 - 28, 2026
Radford University

35th Blue Ridge Highlands Regional Science Fair



Commemorating the 200th anniversary of the modern friction match, invented in 1826 by John Walker, an English chemist.



SEEKING SCIENTISTS

Learn more about Radford University's hands-on programs in natural sciences, computer sciences and healthcare.

join.radford.edu/register/inquiry



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UNIVERSITY

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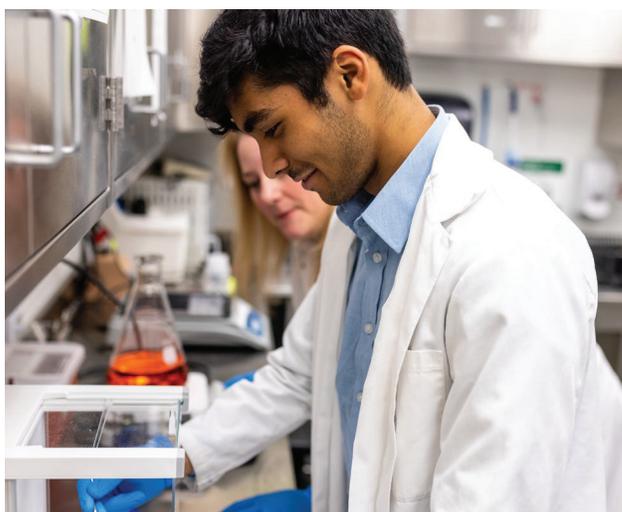
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HIGHLANDER RESEARCH ROOKIES

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Eligibility Requirements

- Incoming or transfer undergraduate status
- Commitment to participate in both fall and spring semesters
- 3.50 GPA
- Curiosity, independence and reliability

For more information:

ours@radford.edu



Schedule of Events

Friday, February 27, 2026

4:00 p.m. - 6:00 p.m. Student registration – Center for the Sciences lobby, next to Planetarium
Setup and SRC approval - CS M56, M57, M58, M59, M65, M70

Saturday, February 28, 2026

7:30 a.m. - 8:00 a.m. Final adjustments to exhibits by student exhibitors – Center for the Sciences M56, M57, M58, M59, M65, M70

7:30 a.m. - 8:00 a.m. Judges arrive and breakfast – Curie 237, 238, and 242

8:00 a.m. - 8:30 a.m. Student check-in – Reed atrium; Students wait in Curie 142

8:00 a.m. - 8:15 am Judges briefing – Center for the Sciences M73

8:15 a.m. - 9:00 a.m. Survey of exhibits and examination of assigned exhibits by judges – Center for the Sciences M56, M57, M58, M59, M65, M70

9:00 a.m. Students go to projects – Center for the Sciences M56, M57, M58, M59, M65, M70

9:00 a.m. - 11:30 am Judge interviews with student exhibitors – Center for the Sciences M56, M57, M58, M59, M65, M70

11:30 a.m. All judge sheets must be turned in – Curie 244

Judge lunch – Curie 237, 238, 242

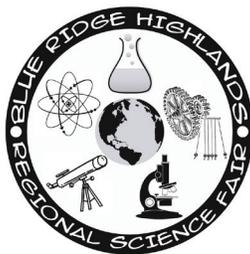
11:30 am - 12:00 pm Judge interview with Grand Award finalists – Center for the Sciences M56, M57, M58, M59, M65, M70

12:00 p.m. Student lunch – Curie 142 and atrium

1:00 p.m. - 2:45 p.m. Exhibits open to public – Center for the Sciences M56, M57, M58, M59, M65, M70

3:00 p.m. Awards Ceremony – Bondurant Auditorium, Preston Hall

After awards Take down projects – Center for the Sciences M56, M57, M58, M59, M65, M70



INTRODUCTION

Science fairs have roots that go back to the 1940s, when they were used to encourage talented high school seniors to pursue a career in science or engineering and to expose the public to scientific work. Today, science fairs are still used to nurture an interest in the sciences, but have expanded to include younger students.

Through poster displays and oral presentations, young scientists present the results of their hard work in the fields of animal sciences, behavioral and social sciences, biochemistry, biomedical and health sciences, biomedical engineering, cellular and molecular biology, chemistry, computational biology and bioinformatics, earth and environmental sciences, embedded systems, energy: chemical, energy: physical, engineering mechanics, environmental engineering, materials science, mathematics, microbiology, physics and astronomy, plant sciences, robotics and intelligent machines, systems software, and translational medical science. This stimulates an active interest in science and engineering in young students, provides an unparalleled experience in research and presentations, and exposes the public to the hard work these students are performing.

With the 35th Annual Blue Ridge Highlands Regional Science Fair, we are continuing a long-standing tradition of scientific exploration and promotion. Participants in this fair represent the counties of Buchanan, Dickenson, Floyd, Giles, Grayson, Montgomery, Pulaski, Russell, Tazewell, Wythe and the cities of Galax, and Radford. Students will compete in either the Junior (6th through 8th grades) or Senior (9th through 12th grades) Division.

The Grand Award winners (the top two Senior Division projects) will participate in the International Science and Engineering Fair (ISEF) to be held in Phoenix, Arizona May 9 - 15, 2026. The Grand Award winners will compete against 1,800 high school students from over 75 countries for approximately \$4 million in prizes.

The First Place winners in each senior category will receive an invitation to participate in the Virginia State Science and Engineering Fair at Piedmont Virginia Community College in Charlottesville, VA on April 10 - 11, 2026.

The top winners in the junior division will receive an invitation to submit an application to compete in the Thermo Fisher Junior Innovator Challenge, with the national finalists competing on October 2026 in Washington, DC.

Christine K. Hermann

Dr. Christine Hermann

Kimberly J. Lane

Dr. Kimberly Lane

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VCOM supports the **Blue Ridge Highlands Regional Science Fair** in its long-standing tradition of scientific exploration and promotion.



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Edward Via College of
Osteopathic Medicine

VIRGINIA

Special Awards and Scholarships

American Association of University Women Awards

Top two females will be awarded \$50 in one of the following categories: Biochemistry, Chemistry, Medicine & Health, Microbiology (Senior Division).

American Chemical Society, Tennessee Virginia Highlands Section Awards

Best three individual projects exhibiting the best and most extensive use of chemistry in any category will be awarded a monetary prize [\$100 (1st), \$75 (2nd), and \$50 (3rd)] (Senior Division).

American Chemical Society, Virginia Blue Ridge Section Award

This award will recognize the best project in chemistry or a related field in each division. One \$100 gift card will be given in the Junior Division and one \$200 award will be given in the Senior Division.

American Psychological Association Award

This award will be given for the best individual project with outstanding achievement in research in psychological sciences under the category of Behavioral and Social Science or any category relating to psychology (Senior Division).

American Red Cross Award - New River Valley; Science in Service to Our Communities

This award will be given for the best individual project that meets one of the following criteria: blood or biomedical research, community health initiative, or disaster prevention or research.

American Society of Biochemistry and Molecular Biology Award

This award is to be awarded to a high school student based on their performance in the area of biochemistry and molecular biology. A \$50 check will be mailed to the student (Senior Division).

American Society of Mammalogists Awards

Every participant whose project is specifically studying mammals is eligible. The focus of the experiment is the mammal (whether it is wild, domesticated, or lab), not incidental to the experiment.

Association of Women Geoscientists Award

The top individual female who most exemplifies high standards of innovativeness and scientific excellence in the geosciences and/or earth sciences will receive this award (Senior Division).

Biomedical Engineering Award - Virginia Tech

The best individual or group project that displays ingenuity, creativity, and detailed design in a project that has application to helping the human body will receive this award. Although the Biomedical Engineering category will be judged thoroughly, the award can be given to a project in any category. The award is given by the Biomedical Engineering Chapter at Virginia Tech (Senior Division).

Citadel Securities Innovation Prize

Two awards (one award in Junior Division, one award in Senior Division) will be given for the project the exemplified ingenuity and invocation through their project idea, goals, and/or design, and thinking creatively about how to solve problems. A \$100 check will be mailed to each student winner.

Genius Olympiad

Two awards (two individual awards or two-person team) will be given for individual excellent work on environment, such as ecology and biodiversity, environmental quality, resources and energy, and human ecology. Winners have the opportunity to compete in the GENIUS OLYMPIAD, June 2026 (Senior Division).

Iota Sigma Pi Awards

Iota Sigma Pi is a national honor society for women in chemistry. Its major objectives are to promote interest in chemistry among women students; to foster mutual advancement in academic, business, and social life; and to stimulate personal accomplishment in chemical fields. This award is to recognize an outstanding project by a female student in the areas of chemistry, biochemistry, or a related science. One \$25 award will be given in the Junior Division and one \$50 award will be given in the Senior Division. This award will be given by Dr. Christine Hermann, the National Vice President of Iota Sigma Pi.

Lemelson Early Inventor Prize

The award winner will have to demonstrate the creation of an invention. An invention is a novel or unique device, process, or method. It could be an improvement on an existing product or a new process for creating a tangible product. The project must incorporate identifying a problem, problem-solving, designing and prototyping a unique solution, entrepreneurial and inventive mindsets, and sustainable solutions. A \$100 check will be mailed to the winning student or team (Junior Division).

Mount Tabor Ruritan Club Awards

These awards will be given to an environmentally related research project with the potential for the most direct impact on the local New River Valley. One \$50 award will be given in the Junior Division and two \$100 awards will be given in the Senior Division.

National Aeronautics and Space Administration Earth System Science Award

The award will be presented to the student whose individual project incorporates studies including different spheres of the Earth system, their interactions and change over time. It should include cause-effect relationships based on evidence and demonstrate a clear understanding of how those relationships affect Earth as a system (Senior Division).

National Oceanic and Atmospheric Administration Award

The National Oceanic and Atmospheric Administration Award will be awarded to the best individual project focused on ecosystems, climate, weather and water, and commerce and transportation.

National Weather Service Award

A rain gauge will be awarded for the best individual project that is best geared towards the National Weather Service's mission. Provide weather, water and climate data, forecasts, warnings, and impact-based decision support services for the protection of life and property and enhancement of the national economy.

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ENROLLMENT MANAGEMENT
UNDERGRADUATE ADMISSIONS
VIRGINIA TECH

Office of Naval Research Distinguished Achievement Awards

Two medallions will be given in the Junior Division and two medallions will be given in the Senior Divisions for the best individual projects in the disciplines of science and engineering. Winners in the Junior Division will be mailed a \$25 check. Winners in the Senior Division will be mailed a \$50 check.

Regeneron Biomedical Science Award

The winning individual project should demonstrate an impressive command of the biomedical sciences and Regeneron's core values. The judging criteria includes a) Lead with Science, b) Take on Big Ideas, c) Make it Happen, d) Be Great Together, and e) Do What's Right. The winner will receive \$375 (Senior Division).

Ricoh Corporation Sustainable Development Award

This individual award recognizes the project with the best outstanding effort in addressing issues of environmental responsibility and sustainable development in a science and engineering project. The award recognizes a quest for new discoveries and to work with the community to inspire a vision of a more sustainable future (Senior Division).

Society for In Vitro Biology

This award is presented to the most outstanding 11th grade student exhibiting in the areas of plant or animal in vitro biology or tissue culture.

Stockholm Junior Water Prizes

The award is for the three best water-related individual science projects at the high school level. The competition is open to science projects aimed at enhancing the quality of life through the improvement of water quality, water resource management, or water and wastewater treatment. Research projects are assessed based on six different criteria: relevance, creativity, methodology, subject knowledge, practical skills, and report /presentation. The National SJWP winner receives \$10,000, a trophy, and an all-expense paid trip to Stockholm, Sweden to compete in the international competition. The international winner receives a cash prize of \$15,000, a cash prize of \$5,000 for their school, and the international trophy. First place winner will be mailed a \$200 check and second place winner will be mailed a \$100 check (Senior Division).

Thermo Fisher Scientific Junior Innovators Awards

The Thermo Fisher Scientific Junior Innovators Challenge (JIC) is the nation's premier STEM research competition for 6th, 7th and 8th grade students. The top 10% of students competing here today have the honor of continuing their science fair journey by applying to compete in the Thermo Fisher JIC. From the entrants, the Top 300 Junior Innovators will be selected and will receive a prize of \$125. From the Top 300, thirty finalists will be selected and compete for more than \$100,000 in prizes, including a top prize of \$25,000 and scholarships for STEM summer camps. Additionally, each of the finalists' schools receive \$1,000 (Junior Division).

United States Air Force Award

Four outstanding science or engineering individual projects will receive a 40oz Stainless Steel Tumbler, Solar Power Bank, Wristband USB Flash Memory Drive, Fidget toy, and Official Air Force Certificate (Senior Division).

United States Metric Association Award

This award will be given to the student whose individual project involves a significant amount of quantitative measurement and should use the units of the SI metric system for those measures. The subject of the project should not be the SI system itself (Senior Division).

VCOM-Virginia Public Health and Healthcare Award

The awards are for individual projects that exhibit innovation in identifying and treating health related problems in rural populations. For the Junior Division, certificates and cash awards of \$100 (1st), \$75 (2nd), and \$50 (3rd) will be awarded for the top winners. For the Senior Division, certificates and cash awards of \$150 (1st), \$100 (2nd), and \$50 (3rd) will be awarded for the top winners.

Virginia Lakes and Watersheds Award

Awards are offered to individual earth/environmental individual science projects related to watershed and water resource management, and/or stormwater projects as they relate to water quality investigations. The junior division winner will receive a \$100 gift card and the senior division winner will receive a \$200 gift card in the mail.

Yale Science and Engineering Association Award

This award will be given to the most outstanding 11th grade student exhibiting in the areas of Computer Science, Engineering, Physics or Chemistry.

Emory and Henry Scholarship

A \$1000 scholarship will be awarded to a student.

New River Community College Scholarship

A \$1000 scholarship will be awarded to student living in Giles, Floyd, Pulaski, or Montgomery Counties or Radford City, 12th grade only.

Radford University Scholarships

Two \$2000 renewable scholarship will be awarded to residents of Virginia. The scholarship is renewable for three years with a 3.2 GPA at Radford University.

Wytheville Community College Scholarship

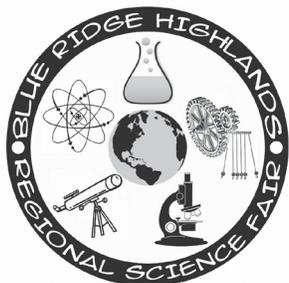
A \$2000 scholarship will be awarded to a senior from the Wytheville Community College service area (Bland, Carroll, Grayson, Smyth, and Wythe counties).



Grand Award Winners

- 2025**
Xavier Gitre
Blacksburg High School
Rishi Nair
Blacksburg High School
- 2024**
Xavier Gitre
Blacksburg High School
Ethan Ririe
Blacksburg High School
- 2023**
Jesse Dulany
Southwest Virginia Governor's School
Davis Reitzel
Southwest Virginia Governor's School
- 2022**
Jacqueline Hou
Blacksburg High School
Brock Duma
Blacksburg High School
- 2021**
Shoshana Elgart
Blacksburg High School
Katelyn Collett
Southwest Virginia Governor's School
- 2020**
Claire Morton
Blacksburg High School
Virginia Worrell
Southwest Virginia Governor's School
- 2019**
Brandon Fan
Blacksburg High School
Ainsley LaPlante
Southwest Virginia Governor's School
- 2018**
Raaga Unmesha Vullikanti
Blacksburg High School
Brandon Fan
Blacksburg High School
- 2017**
Kaelum Hasler
Blacksburg High School
Carly Porter and Morgan Fisher
Southwest Virginia Governor's School
- 2016**
Emily Llaneras
Southwest Virginia Governor's School
Julian Elmasry
Southwest Virginia Governor's School
- 2015**
Emily Llaneras
Southwest Virginia Governor's School
Ashley Jordan and Austin Owen
Southwest Virginia Governor's School
- 2014**
Jordan Kuhn and Eric Chang
Southwest Virginia Governor's School
Meredith Dove and Keena Shang
Blacksburg High School
- 2013**
Jordan Kuhn and Eric Chang
Southwest Virginia Governor's School
Thomas Grey Quesenberry
Southwest Virginia Governor's School
- 2012**
Kevin Kabaria
Richlands High School
Jiyun Chang and Jeremy Kuhn
Southwest Virginia Governor's School
- 2011**
Taylor Hay
Southwest Virginia Governor's School
Heming Zhao
Southwest Virginia Governor's School
- 2010**
Alex Granata
Southwest Virginia Governor's School
Biyuan Zhao
Southwest Virginia Governor's School
- 2009**
Jacob Harvey
Southwest Virginia Governor's School
Tian Zhou
Southwest Virginia Governor's School
- 2008**
Sanjay Kishore
Southwest Virginia Governor's School
Laura Vogelaar
Southwest Virginia Governor's School
- 2007**
Christopher Long
Home Educators of the New River Valley
Josh McCann
Southwest Virginia Governor's School
- 2006**
Christopher Long
Home Educators of the New River Valley
Erin Long
Home Educators of the New River Valley
- 2005**
Loren Liebrecht
Southwest Virginia Governor's School
Ryan Olson
Southwest Virginia Governor's School
- 2004**
Ryan Olson
Southwest Virginia Governor's School
Brian Rice
Southwest Virginia Governor's School
- 2003**
Amy Kabaria
Richlands High School
Brian Rice
Southwest Virginia Governor's School
- 2002**
Thomas Berenato
Blacksburg High School
Shelly Cecil
Tazewell High School
- 2001**
Courtney Cecil
Tazewell High School
Bradford Malbon
Blacksburg High School
- 2000**
Joel R. L. Meeks-Matous
Giles County High School
Nisha Nagarkatti
Blacksburg High School
- 1999**
Nisha Nagarkatti
Blacksburg High School
David W. Rakestraw
Southwest Virginia Governor's School
- 1998**
Jessica DeBusk
Southwest Virginia Governor's School
Nisha Nagarkatti
Blacksburg High School
- 1997**
Nisha Nagarkatti
Blacksburg High School
Kelly E. Seaton
Dayspring Christian Academy
- 1996**
Amanda D. Alley
Southwest Virginia Governor's School
Shannon L. Hughes
Carroll County High School
- 1995**
Jefferson L. Carpenter
Southwest Virginia Governor's School
Setul G. Patel
Narrows High School
- 1994**
James W. Clark
Southwest Virginia Governor's School
Sarah L. Simpkins
Southwest Virginia Governor's School
- 1993**
Brooks Moses
Southwest Virginia Governor's School
Carla Sue Rogers
Pulaski County High School
- 1992**
Jia Liu
Southwest Virginia Governor's School
Garnett Edwin Simmers
Southwest Virginia Governor's School

Compete in the Blue Ridge Highlands Regional Science Fair



You can win cash prizes, trophies, ribbons, and other awards!



Winners may go on to compete in:

**Thermo Fisher
Junior Innovators
Challenge**

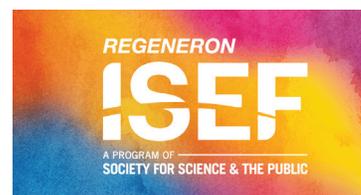
September - October 2026

**Virginia State Science
& Engineering Fair**

April 10 - 11, 2026

**International Science
& Engineering Fair**

May 9 - 15, 2026



The top two senior projects win the Grand Award and are eligible to attend ISEF 2026!

ISEF participants get to meet Nobel Prize Laureates, meet students from over 80 countries, and compete for nearly \$5 million in prizes!

Support the Blue Ridge Highlands Regional (BRHR) Science Fair!

The BRHR Science Fair is funded completely by donations – there is no charge to participants.

If you would like to make a gift to support the BRHR Science Fair, please visit connect.radford.edu/brhrsf or contact us at sciencefair@radford.edu.

Thank you for investing in promising science students and making this transformative experience available for years to come!

Judges

We thank all of the judges that make the science fair successful!

Kwesi Abban Faidoo

Edward Via College of Osteopathic Medicine

Suleiman Abiodun Abdulsalam

College of Human Sciences
Virginia Tech

Preeya Achari

School of Biomedical Engineering and Sciences
Virginia Tech

Steven Ackaway

Edward Via College of Osteopathic Medicine

Mary Opeyemi Adebote

Department of Fish and Wildlife Conservation
Virginia Tech

Foster Agyei

Department of Biological Sciences
Virginia Tech

Nadeem Akbar (Hilbi)

Department of Physics
Virginia Tech

Martin Antwi Boasiako

Department of Biomedical and Pathobiological Sciences
Virginia Maryland College of Veterinary Medicine

Dr. Alan Asbeck

Department of Mechanical Engineering
Virginia Tech

Priscilla Atim

Department of Biomedical and Veterinary Sciences
Virginia Tech

Dr. A. Jonathan Auguste

Department of Entomology
Virginia Tech

Jenna Bakir

Department of Biomedical Engineering
Virginia Tech

Garrett Bangert

Department of Biomedical Engineering
Virginia Tech

Dr. Ian Barland

School of Information and Computing Science
Radford University

Alicia Bateman

Department of Geosciences
Virginia Tech

Samantha Bergman

Edward Via College of Osteopathic Medicine

Avraham Boruchowitz

Environmental Health and Safety
Radford University

Aidan Bridge

Clinical Associate of the Surgical Care Unit
Carilion Clinic

Miranda Brown

Department of Engineering Education
Virginia Tech

Alexandra Campbell

Virginia Tech School of Medicine

Dr. Blaise Costa

Pharmacology Division
Edward Via College of Osteopathic Medicine

Julia Damron

Department of Biomedical Engineering
Virginia Tech

Charles Ellen

Edward Via College of Osteopathic Medicine

Dr. Scott England

Department of Aerospace and Ocean Engineering
Virginia Tech

Dr. Graham Glynn

Department of Biology
Radford University

Zoe Gould

Department of Chemistry
Virginia Tech

Morgan Gunter

Department of Chemistry
Virginia Tech

Dr. George Harakas

Department of Chemistry
Radford University

Joshua Heuler

Department of Biological Sciences
Virginia Tech

De'Yana Hines

School of Biomedical Engineering and Sciences
Virginia Tech

Cade Ingram

Heart Wood Tree Salvage

Dr. Teresa Johnson

Edward Via College of Osteopathic Medicine

Renee Kalu

Edward Via College of Osteopathic Medicine

Betul Karanfil

Department of Chemical Engineering
Virginia Tech

Ms. Natalie Kehrli

Department of Psychology
Virginia Tech

Nikki Keith

Edward Via College of Osteopathic Medicine

Minsung Kim

Department of Biomedical and Veterinary Sciences
Virginia Tech

Jackie Kronen

Edward Via College of Osteopathic Medicine

Dr. Hannah Krueger

Department of Geospatial and Earth Sciences
Radford University

Dr. Eunyoung (Euna) Lee

College of Nursing
Radford University

Brooke A. Lester

School of Neuroscience
Virginia Tech

Nathan Li

Department of Engineering Education
Virginia Tech

Ms. Annie Lin

Department of Neuroscience
Virginia Tech

Dr. Jim Mahaney

Edward Via College of Osteopathic
Medicine

William McCausland

Department of Agricultural Leadership
Comm Education
Virginia Tech

Chaitanya Mishra

Edward Via College of Osteopathic
Medicine

Ruth Mtuwa

Department of Biomedical Engineering
Virginia Tech

Colleen Neff

Edward Via College of Osteopathic
Medicine

Prince Obeng

Department of Biomedical Sciences and
Pathology
Virginia Tech

Chizoba Obunadike

Department of Chemistry
Virginia Tech

Kabiru Okegbenro

Department of Engineering Education
Virginia Tech

Kachukwu Emmanuel Okoh

Department of Chemical Engineering
Virginia Tech

Christina Osuorah

Edward Via College of Osteopathic
Medicine

Benedicta Ottairoegbu

Department of Biological Sciences
Virginia Tech

Dr. Shyam Pahari

Department of Chemistry
Virginia Tech

Reegal Patel

Lockheed Martin Space: Deep Space
Exploration

Dr. Nathaniel Porter

University Libraries
Virginia Tech

Dr. Karen Powers

Department of Biology
Radford University

Dr. Jayasimha Rao

Division of Infectious Diseases
Carilion Clinic / VTCSOM

Dr. Sarah Beth Redmond

Department of Biology
Radford University

Jamesen Reese

Department of Physics
Virginia Tech

Kailynn Roberts

Fralin Biomedical Research Institute
Virginia Tech

Mario Rodriguez

Fralin Biomedical Research Institute
Virginia Tech

Dr. Alan Sentman

SGS Polymer Solutions

Edward Shangin

School of Biomedical Engineering and
Sciences
Virginia Tech

Kylee Shiekh

Department of Engineering Education
Virginia Tech

Dr. Gary Silverman

Department of Environment and
Sustainability
Bowling Green State University
University of North Carolina Charlotte

Laura Simpson

Macromolecules Innovation Institute and
Chemical Engineering
Virginia Tech

Dennis Sleighter

National Weather Service

Hannah Smith

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Medicine

Jake Stewart

Department of Clinical Health
Professions
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Dr. Tatsu Takeuchi

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Virginia Tech

Shawn Veltman

Engineering and GIS
Town of Blacksburg

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and Sciences
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Jessica Wilkes

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Virginia Tech

Dr. Nick Wintz

Department of Mathematics and
Statistics
Radford University

Dr. Caitlin Woodson

Department of Biomedical Sciences and
Pathobiology
Virginia Tech

Dr. Josh Worch

Department of Chemistry
Virginia Tech

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Geospatial and Earth Sciences Geospatial and Earth Sciences • Mathematics and Statics

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WOMEN
IN STEM



July
12-17
2026



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- Biomedical Devices
- Cell and Tissue Engineering
- Biomedical Imaging



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BIOMEDICAL ENGINEERING
VIRGINIA TECH



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Senior Division Projects

ANIMAL SCIENCES

101 Lilly Bowman
The Birth Weight of Lambs When The Ewe is Fed More Protein
Southwest Virginia Governor's School
Sponsor: Sherry Pugh

102 Chloe Fearer
Avian Biodiversity on Organic vs. Natural Farms: A Comparative Analysis
Southwest Virginia Governor's School
Sponsor: Sherry Pugh

103 Xavier Gitre
Parent-absent begging in Eastern Bluebirds: structural characteristics, environmental correlates, and parental responses
Blacksburg High School
Sponsor: Katharine Davis

104 Madeline Jennings
The Laying Rate of Hens in Relation to Their Environment
Southwest Virginia Governor's School
Sponsor: Sherry Pugh

105 Liam Lauria-Leighton
Hermit Crab Claw Strength as Related to Body Weight
Southwest Virginia Governor's School
Sponsor: Rebecca Phillips

106 Aidan Ralston
Does the Configuration of Feeding Troughs Affect the Time it Takes for the Herd to Finish Eating?
Southwest Virginia Governor's School
Sponsor: Megan Arnold

BEHAVIORAL AND SOCIAL SCIENCES

201 Alice Bartos
Exploring the Association Between the KIAA0319 Genetic Marker and Dyslexic Traits in High-Achieving High School Students
Southwest Virginia Governor's School
Sponsor: Rebecca Phillips

202 Eden Bowman
Studying the Difference in Virginia SOL Pass Rates over 3 years to Determine if Disadvantaged groups are Inclining
Southwest Virginia Governor's School
Sponsor: Greg Riffe

203 Piper Chamlis
The Effect of Education about Titanium Dioxide as a Food Additive on Consumer Choices
Southwest Virginia Governor's School
Sponsor: Greg Riffe

204 Sydney Deane
Clarity, Comfort, and Stress: Understanding Students' Experiences with Generative AI in Academic Work
Blacksburg High School
Sponsor: Katharine Davis

205 Evelyn Freday
Examining the Linkage Between Digital Influence and Increasing Student Accommodations in Montgomery County
Blacksburg High School
Sponsor: Katharine Davis

206 Sophie Layne
The Influence of the Situationist International Tactic of Detournement on Contemporary Protest and Activist Methods
Blacksburg High School
Sponsor: Katharine Davis

207 Madilyn A Marsden
Roots to Results: Analyzing The Effects of Pre-Elementary Schol Care on At-risk Students Success
Blacksburg High School
Sponsor: Katharine Davis

208 Addison Mecom
Auditory Pareidolia in Spirit Box Perception
Southwest Virginia Governor's School
Sponsor: Sam Muriello

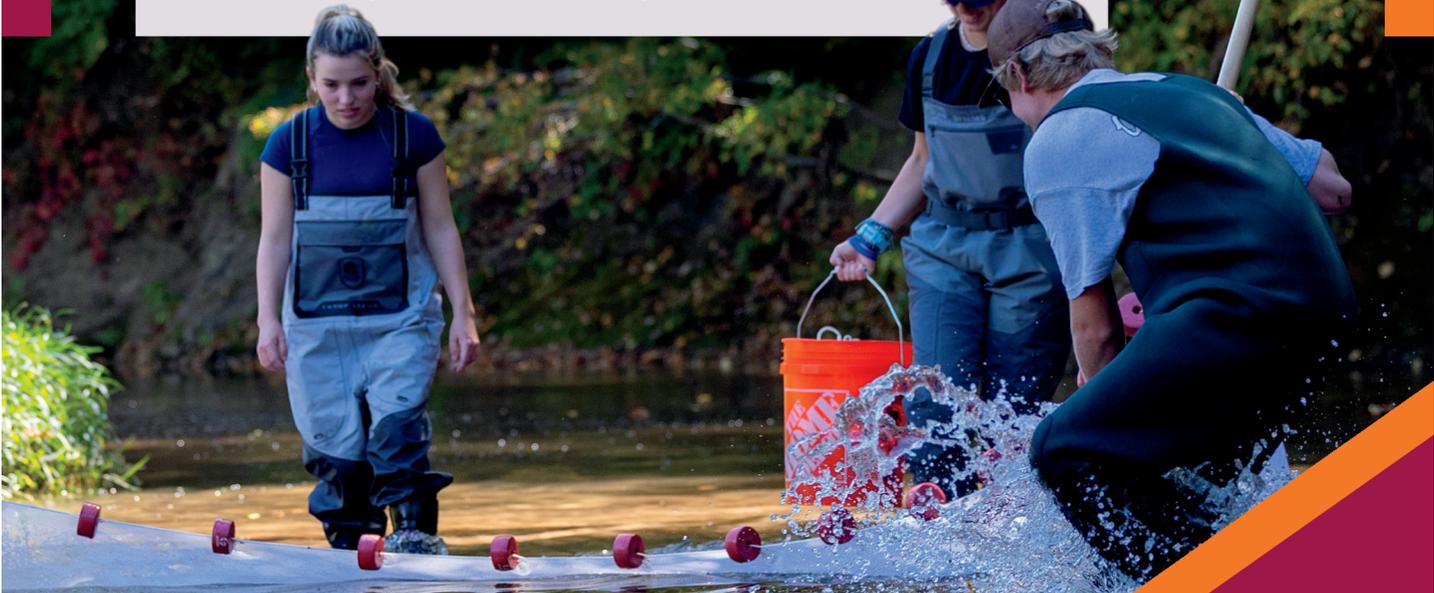
209 Katelynn Owens
Connected
Council High School
Sponsor: Rita Breeding

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Impact of Video Game Platform Types on Touch Based Reaction Times
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211 Lilyanna Simpkins
Evaluating the Emotional Response between Real and AI Images from Different Softwares
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212 Eli Stone
How Does One's Environment Affect Risk Management?
Southwest Virginia Governor's School
Sponsor: Greg Riffe

BIOCHEMISTRY BIOMEDICAL AND HEALTH SCIENCES

301 Santiago Angulo
The effect of weight training on sprint performance in adolescent male swimmers during a three month period
Blacksburg High School
Sponsor: Katharine Davis

302 Alexandra Ni
Comparative Analysis of AlphaFold Prediction Confidence in Structured and Intrinsically Disordered Protein Interactions
Southwest Virginia Governor's School
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303 Joshua Osemobor
Analyzing the Effectiveness of Expansion Techniques of Meningeal Tissue
Southwest Virginia Governor's School
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304 Jacelyn Peak
From Powder to Power: Absorption Performance of Synthetic Hydrogels
Twin Valley High School
Sponsor: Nikki Peak

305 Leah Razor
The Effect of Ultrasound Waves on Fluids' Permeation through the Skin
Southwest Virginia Governor's School
Sponsor: Matthew Frazier

BIOMEDICAL ENGINEERING

401 Larah Clemons
Supportive Capabilities of a Limited Motion Ankle Brace
Southwest Virginia Governor's School
Sponsor: Matthew Frazier

402 Avi Gandhi
Histotripsy for the Treatment of Cauliflower Ear: A Feasibility Study in Porcine Ears
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Sponsor: Rebecca Phillips

403 Mirabella Garza
Influence of Infant car Seat Carrying Technique on Lower-limb Symmetry During Gait
Blacksburg High School
Sponsor: Katharine Davis

404 Joanna Jackson
Screwable Modular Components for the Pylon of Pediatric Leg Prosthetics
Southwest Virginia Governor's School
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405 Ian Jora Macrea
The Effects of Electromechanical Uncouplers Blebbistatin and BDM on Cardiomyocyte Conduction Velocity
Blacksburg High School
Sponsor: Katharine Davis

CELLULAR AND MOLECULAR BIOLOGY MICROBIOLOGY

501 Saad Ali
*Investigating Diurnal Oscillations of Cell Division Timing in *Stentor coeruleus**
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502 Lauren Linford
*Testing How Often Trombone and Baritone Mouthpieces Should Be Cleaned to Remove *Streptococcus salivarius**
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Sponsor: Rebecca Phillips

503 Rishi Nair
Comparing type 1 and 2 immunoglobulins in STAT4 myeloid cell knock out in MRL/lpr mice
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703 Milo Tao-Lin
Investigating the effect of the Number of Predictor Locations and Predictor Location Concentration on LSTM Precipitation Dry/Wet Hour Classification
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CHEMISTRY

601 Olivia Close
Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in Honey Produced in Southwest Virginia Apiaries
Southwest Virginia Governor's School
Sponsor: Jared Brown

602 Lorelei Collier
Comparing Protein Content in Gluten-Free Flours
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Sponsor: Jared Brown

603 Avery Dhanraj
How Sulfur-Containing Products Affect the Tarnish Rate of Silver-Plated Jewelry
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604 Mya Gustafson
The Effect of the Type of Egg on Soufflé Characteristics
Southwest Virginia Governor's School
Sponsor: Megan Arnold

EARTH AND ENVIRONMENTAL SCIENCES

701 Lucas Holland
Modeling Spatial Temperature Structure Using Generalized Additive Models and Local Indicators of Spatial Association
Blacksburg High School
Sponsor: Katharine Davis

702 Haley Stone
Thermal Dynamics of Caves: Influence of Single Versus Multiple Entrances
Southwest Virginia Governor's School
Sponsor: Rebecca Phillips

704 Josiah Whitman
Nitrogen Runoff in a Farming Area
Southwest Virginia Governor's School
Sponsor: Jared Brown

EMBEDDED SYSTEMS ROBOTICS AND INTELLIGENT MACHINES

801 Mateja Grove
Harmonic-Based Estimation of Coil Misalignment in Low-Power Wireless Power Transfer Systems
Blacksburg High School
Sponsor: Katharine Davis

802 Ian Yu
Performance Analysis of a 5 Bar linkage entapod for Martian locomotion
Blacksburg High School
Sponsor: Katharine Davis

803 Ethan Zhu
Autonomous Robotic Arm for Detection and Collection of Sidewalk Trash Using Machine Learning and Stereo Vision
Blacksburg High School
Sponsor: Xiaoyi Xu

ENERGY: SUSTAINABLE MATERIALS AND DESIGN ENVIRONMENTAL ENGINEERING

901 Dahlia Obiedat
Evaluating Solar Powered Desalination on San Andres Island: A Systems-Level Feasibility Analysis
Blacksburg High School
Sponsor: Michele Sudweeks

902 Eleanor Steele
Temperature-Dependent Filtration Efficiency of SMS Nano-biochar for Trimethoprim Removal
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903 Tony Zhao
Open Circuit Potential of FUNaK salt in 0.5M Nitric Acid
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1103 Maddi Shay
How Different Materials of Softball and Baseball Glove Affect the Break-in Process
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Sponsor: Matthew Frazier

ENGINEERING TECHNOLOGY: STATICS AND DYNAMICS

1001 Cedar Heartway
How Varying Serrations on Trailing Edges of Propeller Affect the Noise Produced by Micro Drone Propellers
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Sponsor: Matthew Frazier

1002 Mohamed Abdel Motaleb
How do different mycelium species and substrate formulations influence soil stability and strength
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Sponsor: Katharine Davis

1003 Layla Sessor
A Comparison of Different Pill Bottle Cap Openers
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Sponsor: Sherry Pugh

1004 Spencer Sisson
Using an Arduino Microcontroller and Repurposed Remote Control Car to Develop a Pacing Device for Track Athletes
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Sponsor: Matthew Frazier

MATERIALS SCIENCE

1101 Michael Baron
The Effects of Assorted Fluids on Saxophone Reed Durability
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1102 Lydia Pratt
The Effects of Nickel Content and Quenching Rate on the Mechanical Properties and Microstructure of ASTM A588 Weathering Steel
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1104 Addison Vest
The Effect of Color on the Bleed-Through Rate of Highlighters
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MATHEMATICS

1201 Ellie Blankenship
The Probability of Two People Wearing the Same Color Shirt
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1202 Cohen Johnson
MAHA Urban and Rural Asthma Rates
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1203 Adelaide Li
Long-Term Sustainability of a Wealth Tax Base Under Liquidity Constraints: An Agent-Based Modeling Approach
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Sponsor: Katharine Davis

1204 Addison Sheets
Determining Funding Strategies at Southwest Virginia Animal Shelters
Southwest Virginia Governor's School
Sponsor: Megan Arnold

PHYSICS AND ASTRONOMY

1301 Jay Hoerter
Observer Sensitivity to an Oscillating Diode
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1302 Melvin Palmer
Defending Against Cosmic Muons: How Material Type, Thickness, and Location Affect Human Exposure
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1303 Josiah Townsend
An Analysis of Neutrino Detectors in Nuclear Security
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1402 Saige Carico
Limosilactobacillus fermentum on Growth Enhancement of Pea Plants in Acidic Soil
Southwest Virginia Governor's School
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PLANT SCIENCES

1401 Leighann Bruce
Soil, Climate, and Carrot Quality: Comparing Agricultural Regions in Virginia
Southwest Virginia Governor's School
Sponsor: Jared Brown

1403 Garrison Wheatley
The Effects of the Introduction of Salicylic Acid and a Rapid Drop in Nutrient Concentration on Spirodela polyrhiza for the Purpose of Inducing Flowering
Southwest Virginia Governor's School
Sponsor: Sherry Pugh

Junior Division Projects

ANIMAL SCIENCES BIOCHEMISTRY BIOMEDICAL AND HEALTH SCIENCES MICROBIOLOGY

2101 Sora Powers
Bunny-Bonding: How does it help when training a rabbit?
St. John Nuemann Academy
Sponsor: Suzanne Gilley

2102 Lyhout Veng
Determining Mass of Extracted DNA from Different Fruits
St. John Nuemann Academy
Sponsor: Suzanne Gilley

2103 Dylan Smith and Gracie Viers
Racing Heart
Twin Valley Elementary/Middle School
Sponsor: Rebecca Whited

2104 Sophia Wolfrum
Rising to the Occasion
Homeschool
Sponsor: Christina Wolfrum

CHEMISTRY EARTH AND ENVIRONMENTAL SCIENCES

2201 Mya Cecchini
Stain Pain Hurt Your Brain? The Ultimate Stain Remover Faceoff
Classical Conversations
Sponsor: Anna Cecchini

2202 Aiden Fuller and Brayden Fuller
The Power of Rust
Council Elementary School
Sponsor: Rita Breeding

2203 Makailyn Hurley
Rubber Egg
Hurley Elementary/Middle School
Sponsor: Scott Embrey

2204 Jodi Keller
Which Liquid Will Freeze Faster?
Twin Valley Elementary/Middle School
Sponsor: Lori Ratliff

2205 Alivia Ly and Angela Lin
Frosting Mania
Riverview Elementary/Middle School
Sponsor: Amanda Shelton

2206 Zoey Owens
Nail Polish
Twin Valley Elementary/Middle School
Sponsor: Lori Ratliff

2207 Tanna Redd
Measuring Volcanic Eruptions
St. John Nuemann Academy
Sponsor: Suzanne Gilley

2208 Withdrawn

2209 Emily Vasquez-Mayorga
Ingredient Interaction: What happens when an ingredient is left out?
St. John Nuemann Academy
Sponsor: Suzanne Gilley

ENGINEERING TECHNOLOGY: STATICS AND DYNAMICS
MATERIALS SCIENCE
PHYSICS AND ASTRONOMY

2301 Analiese Hess
The Great Weight Debate
Homeschool
Sponsor: Danielle Hess

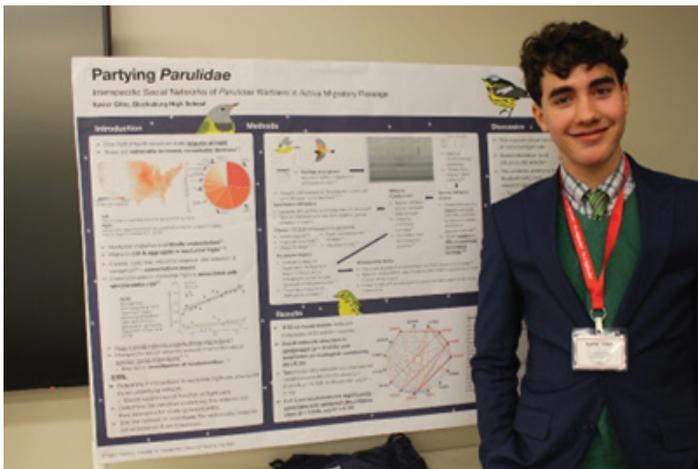
2302 Emily Layne
Hydraulics
Hurley Elementary/Middle School
Sponsor: Scott Embery

PLANT SCIENCES

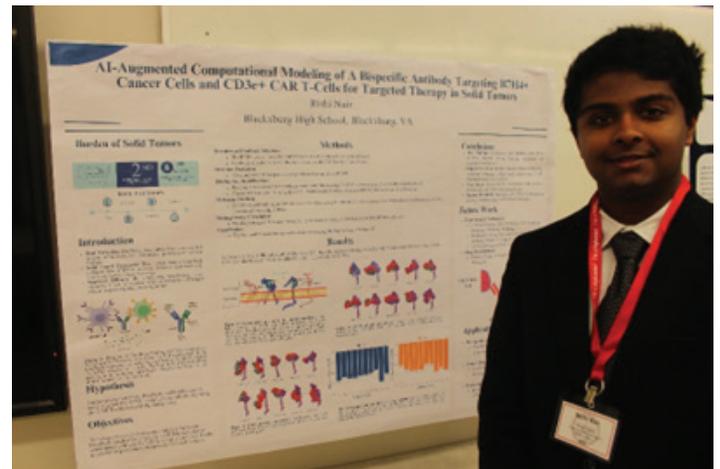
2401 Becca Diaz
Carnation Information: which one dies first?
St. John Nuemann Academy
Sponsor: Suzanne Gilley

2402 Alexandre Domingues
The Effect of Various Fertilizers on Radish Growth
St. John Nuemann Academy
Sponsor: Suzanne Gilley

2025 Grand Award Winners



Xavier Gitre
Interspecific Social Networks of Parulidae Warblers in Active Migratory Passage
Blacksburg High School
Sponsor: Katharine Davis



Rishi Nair
AI-Augmented Computational Modeling of Bispecific Antibody Targeting B7H4+ Cancer Cells and CD3e+ CAR T-Cells for Targeted Therapy in Solid Tumors
Blacksburg High School
Sponsor: Katharine Davis

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Classical Conversations
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Homeschool
Hurley Elementary/Middle School
Riverview Elementary/Middle School
Saint John Nuemann Academy
Twin Valley Elementary/Middle School

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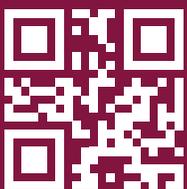
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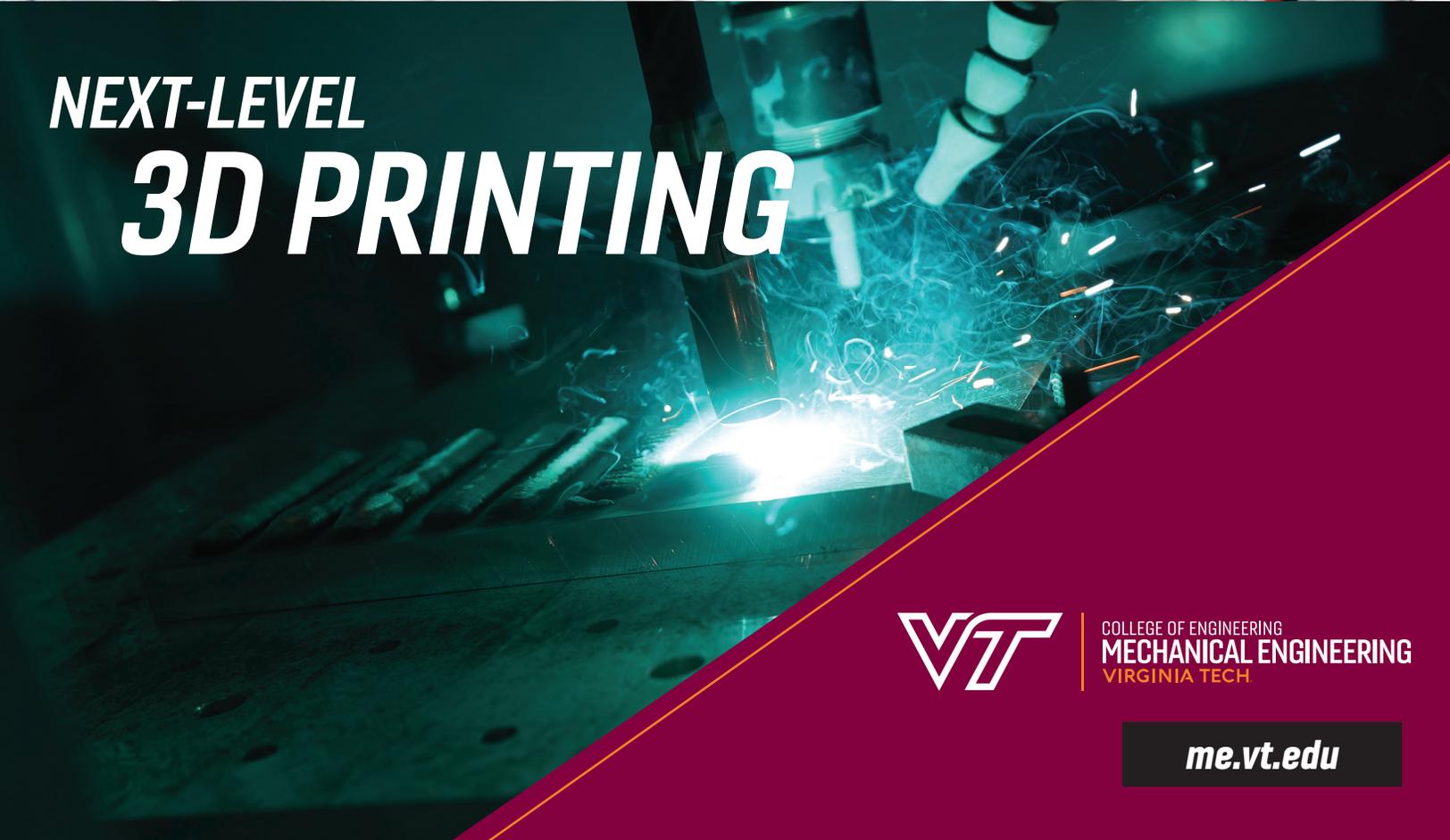
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