

**35<sup>th</sup> BLUE RIDGE HIGHLANDS REGIONAL SCIENCE FAIR  
FEBRUARY 27 - 28, 2025  
RADFORD UNIVERSITY**

**VIRGINIA STATE SCIENCE AND ENGINEERING FAIR  
DELEGATES**

- 103 Xavier Gitre**  
*Parent-absent begging in Eastern Bluebirds: structural characteristics, environmental correlates, and parental responses*  
Blacksburg High School  
Sponsor: Katharine Davis
- 210 Aleah Palmer**  
*Impact of Video Game Platform Types on Touch Based Reaction Times*  
Southwest Virginia Governor's School  
Sponsor: Megan Arnold
- 211 Lilyanna Simpkins**  
*Evaluating the Emotional Response between Real and AI Images from Different Softwares*  
Southwest Virginia Governor's School  
Sponsor: Megan Arnold
- 303 Joshua Osemobor**  
*Analyzing the Effectiveness of Expansion Techniques of Meningeal Tissue*  
Southwest Virginia Governor's School  
Sponsor: Rebecca Phillips
- 404 Joanna Jackson**  
*Screwable Modular Components for the Pylon of Pediatric Leg Prosthetics*  
Southwest Virginia Governor's School  
Sponsor: Matthew Frazier
- 501 Saad Ali**  
*Investigating Diurnal Oscillations of Cell Division Timing in Stentor coeruleus*  
Blacksburg High School  
Sponsor: Katharine Davis
- 601 Olivia Close**  
*Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in Honey Produced in Southwest Virginia Apiaries*  
Southwest Virginia Governor's School  
Sponsor: Jared Brown

- 701 Lucas Holland**  
*Modeling Spatial Temperature Structure Using Generalized Additive Models and Local Indicators of Spatial Association*  
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
- 902 Eleanor Steele**  
*Temperature-Dependent Filtration Efficiency of SMS Nano-biochar for Trimethoprim Removal*  
Southwest Virginia Governor's School  
Sponsor: Sherry Pugh
- 1004 Spencer Sisson**  
*Using an Arduino Microcontroller and Repurposed Remote Control Car to Develop a Pacing Device for Track Athletes*  
Southwest Virginia Governor's School  
Sponsor: Matthew Frazier
- 1102 Lydia Pratt**  
*The Effects of Nickel Content and Quenching Rate on the Mechanical Properties and Microstructure of ASTM A588 Weathering Steel*  
Southwest Virginia Governor's School  
Sponsor: Sherry Pugh
- 1203 Adelaide Li**  
*Long-Term Sustainability of a Wealth Tax Base Under Liquidity Constraints: An Agent-Based Modeling Approach*  
Blacksburg High School  
Sponsor: Katharine Davis
- 1302 Melvin Palmer**  
*Defending Against Cosmic Muons: How Material Type, Thickness, and Location Affect Human Exposure*  
Southwest Virginia Governor's School  
Sponsor: Sherry Pugh
- 1402 Saige Carico**  
*Limosilactobacillus fermentum on Growth Enhancement of Pea Plants in Acidic Soil*  
Southwest Virginia Governor's School  
Sponsor: Sherry Pugh