

**34<sup>th</sup> BLUE RIDGE HIGHLANDS REGIONAL SCIENCE FAIR**  
**MARCH 7 - 8, 2025**  
**RADFORD UNIVERSITY**

**VIRGINIA STATE SCIENCE AND ENGINEERING FAIR**  
**DELEGATES**

- 101 Xavier Gitre**  
*Interspecific Social Networks of Parulidae Warblers in Active Migratory Passage*  
Blacksburg High School  
Sponsor: Katharine Davis
- 208 Enzo Nunez**  
*Does the Percentage of Industry Jargon in Meta Description Tags Have an Impact on Website Engagement Rate?*  
Southwest Virginia Governor's School  
Sponsor: Sam Muriello
- 303 Elizabeth Zhang**  
*Morphological Changes to the Pelvic Floor Muscle Complex Before, During, and After Pregnancy in a Murine Model*  
Blacksburg High School  
Sponsor: Katharine Davis
- 504 Addison Sheets**  
*Determining the Accuracy of Chlorinity in Public Pools*  
Southwest Virginia Governor's School  
Sponsor: Jared Brown
- 505 Natalie Tessar**  
*Exploring the Relationship Between Metalloids and Tampon Absorbency Sizes*  
Southwest Virginia Governor's School  
Sponsor: Jared Brown
- 602 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

- 701 Jarib Cruz**  
*The Effect of Varying Magnetic Field Intensities on the Solubility of Minerals*  
Southwest Virginia Governor's School  
Sponsor: Jared Brown
- 704 Finn Lucas**  
*Effectiveness of Water Treatment Processes*  
Southwest Virginia Governor's School  
Sponsor: Jared Brown
- 904 Minh Nguyen**  
*Optimizing Meta-Atoms for Large Scale Metalenses*  
Blacksburg High School  
Sponsor: Katharine Davis
- 906 Ian Yu**  
*A Novel Approach to Martian Obstacle Detection Through Ultrasonic Transducers*  
Blacksburg High School  
Sponsor: Katharine Davis
- 1001 Quinlan Beegle**  
*Developing High Friction Insoles to Reduce the Size and Frequency of Microslips in Sockless Track Athletes' Running Economy*  
Southwest Virginia Governor's School  
Sponsor: Matt Frazier
- 1004 Spencer Sisson**  
*Sensor to Measure Tilt While Running*  
Southwest Virginia Governor's School  
Sponsor: Matt Frazier
- 1103 Charlotte Phillips**  
*Investigating Microplastic Trapping Efficiency of Coral Reef Regrowth Structures in Simulated Ocean Currents in the Presence of Modeled *Acropora cervicornis**  
Southwest Virginia Governor's School  
Sponsor: Rebecca Phillips
- 1204 Lydia Pratt**  
*Effects of Coatings on the Ultrasonic Testing of Welds on Structural Steel*  
Southwest Virginia Governor's School  
Sponsor: Sherry Pugh
- 1205 Alexandria Swenson**  
*Aesthetic Properties of Alginate-Based Yarn and Its Commercial Counterparts*  
Southwest Virginia Governor's School  
Sponsor: Jared Brown

**1305 Eleanor Steele**

*Effects of Biochar Soil Amendment of Pisam sativum Under Flood Conditions*

Southwest Virginia Governor's School

Sponsor: Rebecca Phillips

**1402 Ingrid Jora Macrea**

*The Accuracy of an American Sign Language Recognition Deep Neural Network Under Healthcare Conditions*

Blacksburg High School

Sponsor: Katharine Davis