

PROCEEDINGS

71

VAS Best Student Paper Awards

Agriculture, Forestry, and Aquaculture

Best Student Paper:

The Pectoral Spine of the Channel Catfish as an Anti-predator Adaptation: an Experimental Study
Bishop T. Boshier, Department of Biology, Virginia Commonwealth University

Honorable Mention:

Cantaloupe Production Without Using Nitrogen Fertilizers
Brian Wooden, Agricultural Research Station, Virginia State University

Honorable Mention:

Relationship between Alkaloids in Seed and White Lupin Plant Tissue
Kristina Staples, Agricultural Research Station, Virginia State University

Archaeology

Best Student Paper:

17th and 18th Century Turned Lead at Shirley Plantation
K. L. Swanson, William and Mary Center for Archaeological Research

Astronomy, Mathematics, and Physics

Best Student Paper:

The Scientific Dialogue between Light and Sound: Siir's Photo-Acoustic Theory
Siir Kilkis, Georgetown University

Biology with Microbiology and Molecular Biology

Best Student Paper:

A Comparison of Mitochondrial DNA Analysis and Morphological Characters to Determine the Taxonomy of *Cicindela hirticollis* Populations on the Mid-Atlantic Seaboard
M. Ryan Woodcock, Department of Biology, Randolph-Macon College

Honorable Mention:

PAFAH Regulation by STAT-1
Jean Lin, Department of Biochemistry, Virginia Commonwealth University

Honorable Mention:

Transforming Growth Factor beta-1 Control of Mouse Mast Cell Survival and Function
Farnaz Norozian, Department of Biology, Virginia Commonwealth University

Honorable Mention:

Development of a Recombinant Vaccine for Pneumonic Plague Using a VirG-TyeA Fusion Protein Expression System
Kristina Ryden, Department of Integrated Science and Technology, James Madison University

Biomedical and General Engineering

Best Student Paper:

Changes in Dominant Frequency Domains Prior to Spontaneous Termination of Ventricular Fibrillation

Suresh E. Joel, Department of Biomedical Engineering, Virginia Commonwealth University

Honorable Mention:

Proximal Humeral Fractures: Comparison of Fixation Methods

Joseph M. Iaquinto, Department of Biomedical Engineering, Virginia Commonwealth University

Honorable Mention:

On the Use of Quasi-Optimal Bounding Ellipsoid (QOBE) Algorithm in Classification Problems

Timothy Kraus, Dept of Physics, Computer Science and Engineering, Christopher Newport University

Botany

Best Student Paper:

The Genetic Expression of the Chloroplast Maturase Gene, *matK*

Michelle M. Barthet, Department of Biology, Virginia Tech

Honorable Mention:

Propagation of *Saintpaulia rupicola* from Encapsulated Shoot Primordia

Clara Jo Elder, Department of Biology, James Madison University

Honorable Mention:

Genomic Relations in the Peanut Genus (*Arachis*)

S. A. Friend, Department of Biology, Virginia Tech

Chemistry

Best Student Paper:

Infrared Reflectance Absorbance Spectroscopy of the Temperature Dependence of Liquid Crystal Adsorption on Graphite

E. M. Griffiths, Department of Chemistry, Mary Washington College

Honorable Mention:

Synthesis of Open Framework Transition Metal Phosphonates Derived from Substituted Benzyl Phosphonates

Christine L. Heinecke, Department of Chemistry, James Madison University

Computer Science

Best Student Paper:

Multi-Modal Pervasive Computing

Moses C. Allotey-Pappoe, Department of Computer Science, Norfolk State University

Geography

Best Student Paper:

Techniques in Coastal Dune Feature Mapping, First Landing State Park, Virginia

George M. McLeod, Department of Political Science and Geography, Old Dominion University
Materials Science

Best Student Paper:

Fabrication of Polymer-Based Microfluidic Devices

Antoinett C. Bonhivert, Department of Chemistry, JMU

Medical Sciences

Best Student Paper:

Hsp90 and p23: A Functional Association with Telomerase and Telomeres?

Sarah A. Compton, Department of Pharmacology and Toxicology, Virginia Commonwealth University

Honorable Mention:

Mast Cell Development and Parasite Immunity in Mice with a Simultaneous Disruption of IL-3 and IL-4R

James W. Chumley, Department of Biology, James Madison University

Honorable Mention:

Aging Causes Elevated Intracellular Calcium Levels and Altered Calcium Homeostatic Mechanisms in Hippocampal Neurons

Laxmikant S. Deshpande, Department of Pharmacology and Toxicology, Virginia Commonwealth University

Natural History and Biodiversity

Best Student Paper:

Current Research on the Endangered Northern Flying Squirrels (*Glaucomys sabrinus*) of Virginia

James L. Sparks Jr., Department of Biology, Virginia Commonwealth University

Honorable Mention:

Systematics and Life History of Pulmonate Gastropods in the Virginia Piedmont Area (Mollusca: Gastropoda: Pulmonata)

Corraine A. Scott, Department of Biology, Randolph-Macon Woman's College

Psychology

Best Graduate Student Paper:

Auditory Route Guidance Systems and Facilitating the Development of Cognitive Maps

Ian Reagan, Department of Psychology, Old Dominion University

Best Undergraduate Student Paper:

Attentive Driving: Verbal Warnings Applied to Collision Avoidance Systems.

Katrina R. Lewis, Department of Psychology, Old Dominion University

Graduate Student Honorable Mention:

Body Satisfaction and Racial Identity Development Differences between Black and White Females

Courtney Hanley, Department of Psychology, Old Dominion University

Undergraduate Student Honorable Mention:

Body Image and the Assessment of Appearance Behaviors: Development and Validation of the Appearance Behaviors Inventory

Erin Mehalic, Department of Psychology, Old Dominion University

Statistics

Best Student Paper:

Optimal Incomplete Designs with Two Blocks

Bo Jin, Department of Statistics, Virginia Tech

Honorable Mention:

Quasi-Multinomial Distributions: Properties and Applications

Deepak Mar, Department of Mathematics and Statistics, Old Dominion University

Honorable Mention:

E-Optimal Designs with Three Treatments in Multiway Blocking

Valentin Parvu, Department of Statistics, Virginia Tech