

VCU Breakthroughs Fund projects and recipients listed by primary ONE VCU Research initiative

Enriching the Human Experience

“Toward Creative Human-Robot Teams”

Patrick Martin, Ph.D., College of Engineering; Kate Sicchio, Ph.D., School of the Arts

“Launching Excellence in Virtual Reality”

James Thomas, Ph.D., College of Health Professions; Nathaniel Kinsey, Ph.D., College of Engineering; Semi Ryu, School of the Arts

Achieving a Just and Equitable Society

“The Effect of Parent-Driven Positive Behavior Interventions on Challenging Behavior Reduction and Home/Community Participation for Military Dependents With Autism Spectrum Disorder”

Lauren Avellone, Ph.D., School of Education; Kelli Gary, Ph.D., College of Health Professions

“Symmetry, Surfaces and Knots: Empowering Middle School Students Through Experiential Activities in Geometry”

Visala Satyam, Ph.D., College of Humanities and Sciences; Marco Aldi, Ph.D., College of Humanities and Sciences; Christine Lee Bae, Ph.D., School of Education; Allison Moore, Ph.D., College of Humanities and Sciences; Nicola Tarasca, Ph.D., College of Humanities and Sciences

“Inconspicuous Extremism: Using Deep Learning, Distant Supervision and Panel Surveys to Uncover the Microfoundations of Far-Right Social Media Influence”

David Webber, Ph.D., L. Douglas Wilder School of Government and Public Affairs; Ugochukwu Etudo, Ph.D., School of Business; Christopher Whyte, Ph.D., Wilder School of Government and Public Affairs

“Merging Developmental and Educational Perspectives on Ethnic-Racial Identity and Ethnic-Racial Socialization to Foster Culturally Responsive Education”

Chelsea Williams, Ph.D., College of Humanities and Sciences; Fantasy Lozada, Ph.D., College of Humanities and Sciences; Hillary Parkhouse, Ph.D., School of Education; Jesse Senechal, Ph.D., School of Education

Optimizing Health

“In Vitro and In Silico Hybrid Methods for Optimal And Consistent Nose-to-Brain Delivery of Novel Insulin-Loaded Nanocarriers to Treat Alzheimer’s Disease”

Laleh Golshahi, Ph.D., College of Engineering; Michael Hindle, Ph.D., School of Pharmacy; Worth Longest, Ph.D., College of Engineering

“Rational Structure-Based Design of Novel Psychoplastogens”

Javier González-Maeso, Ph.D., School of Medicine; Malgorzata Dukat, Ph.D., School of Pharmacy

“Elucidation of the Mechanistic Basis for the Association Between Sneathia And Human Papillomavirus”

Kimberly Jefferson, Ph.D., School of Medicine; Claire James, Ph.D., School of Dentistry; Iain Morgan, Ph.D., School of Dentistry

“Development of a Novel Virtual Reality Treatment for Emerging Adults With ADHD”

David Shepherd, Ph.D., College of Engineering; Joshua Langberg, Ph.D., College of Humanities and Sciences

“Novel Mu Opioid Receptor Antagonists to Treat Fentanyl Overdose”

Yan Zhang, Ph.D., School of Pharmacy; William Dewey, Ph.D., School of Medicine

Supporting Sustainable Energy and Environments

“Energy Efficient Neurocomputer”

Jayasimha Atulasimha, Ph.D., College of Engineering; Dean Krusienski, Ph.D., College of Engineering; Cheng Ly, Ph.D., College of Humanities and Sciences

“Additive Manufacturing of Anisotropic Alnico Permanent Magnets”

Radhika Barua, Ph.D., College of Engineering; Everett Carpenter, Ph.D., College of Humanities and Sciences; Afroditi Filippas, Ph.D., College of Engineering

“Integrating climate-driven environmental changes and public health outcomes”

Gregory Garman, Ph.D., Life Sciences; Alex Krist, M.D., School of Medicine