## School of Agriculture

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
- Development of new crops for production of food, feed, and industrial products.  
- Genetic improvement of crop plants to increase yield, quality, and other traits. |
- Impact of environmental insults (diet, genetics, lifestyle, toxins) on mechanisms of cellular signaling and function.  
- Investigation of the genes implicated in human dilated cardiomyopathy and atherosclerosis.  
- Molecular studies on parasite control in small ruminants. |
| Hairston, Jewel  | [http://myprofile.cos.com/jhairston@vsu.edu](http://myprofile.cos.com/jhairston@vsu.edu) | - Manage and lead extension, research and academic programs within the School of Agriculture.  
- Extension education and technical assistance programs for limited-resource and underserved families, farmers, youth, and communities throughout the state of Virginia.  
- History & Philosophy of Career and Technical Education.  
- Partnerships with local school systems, local state, and federal agencies, organizations, and diverse stakeholders to address clientele needs across the state of Virginia.  
- Produce measurable changes in the civil rights practices and documentation strategies. |
- Organic agriculture production systems.  
- Non-timber forest products.  
- Commercial production of mushrooms.  
- Commercial production of fresh cut flowers.  
- Commercial production of American ginseng.  
- Agriculture tourism. |
<table>
<thead>
<tr>
<th>Faculty</th>
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</tr>
</thead>
</table>
                        • Obesity Prevention and Treatment.  
                        • Nutrition and Public Health Issues.  
                        • Dietetics Education and Program Planning. |
| Kramer, Mark   | http://myprofile.cos.com/kraemer3 | • Integrated Pest Control.                                                         |
| Landesman, Louis | http://myprofile.cos.com/rashidas | • Planning a project to raise ornamental aquatic plants in tobacco transplant greenhouses.  
                        • Raising algae for biofuel.  
                        • The use of duckweed to treat agricultural and domestic wastewater.  
                        • Floating aquatic plants like Lemma, Spirodela, Wolffia and Azolla for phytoremediation of contaminated effluent waters. |
| Mersie, Wondi  | http://myprofile.cos.com/wondimersie | • Development of best management practices that protect water resources from agricultural chemicals in runoff.  
                        • Determination of the fate of pesticides in the environment.  
                        • Control of invasive plant species. |
| Mullins, Christopher | http://myprofile.cos.com/cmullins1 | • Protected culture of horticulture crops  
                        • Greenhouse vegetable production  
                        • High tunnel production of crops  
                        • Irrigation for vegetables  
                        • Plasticulture systems for vegetable production  
                        • Edamame production |
| Nartea, Theresa | http://myprofile.cos.com/tnartea | • Direct Farm Marketing.  
                        • Web Based Marketing.  
                        • Sustainable Small Business & Marketing Strategies.  
                        • Alternative, Niche, Value Added Market Development.  
                        • Farmers Market Development.  
                        • Workplace Community Supported Agriculture. |
## School of Agriculture

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<th>Faculty</th>
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</table>
● Food Safety.  
● Obesity.  
● Agribusiness.  
● Agricultural Production Economics.  
● Natural Resources. |
● Antimicrobial sanitizers and cleaners.  
● Fruit and vegetable processing.  
● Microbial detection and intervention.  
● Hazard Analysis and Critical Control Points (HACCP) system and verification.  
● Overseas experience with emphasis on food safety and quality management. |
● Novel food products containing vitamins, essential fatty acids, antioxidants, and other phytochemicals, and properties such as anti-diabetic effects, antiproliferation of cancer cells, cyclooxygenase II enzyme inhibition, and antioxidant activities. |
● Plant abiotic stress tolerance.  
● Marker assisted selection and molecular breeding. |
● Food Safety.  
● Veterinary Medicine. |
● Sustainable production systems for hair sheep and meat goats.  
● Assisted reproductive technologies for small ruminants. |
## School of Agriculture

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>● Novel Food Packaging for Shelf-life Extension of Fresh Produce and Processed Products.</td>
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<td></td>
<td></td>
<td>● Physical and Engineering Properties of Food and Biological Materials.</td>
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<tr>
<td></td>
<td></td>
<td>● Value-added Utilization of Food Industry Waste and Biomass.</td>
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<td></td>
<td></td>
<td>● Curriculum, Education, Event Planning</td>
</tr>
</tbody>
</table>
## School of Business

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
● Bio-Informatics.  
● Computer Networks.  
● Computer Architecture.  
● Algorithms.  
● Parallel and Distributed Computing. |
● Virginia Administrative Law.  
● Economic Development.  
● Economic Dislocation. |
● Decision Support Systems.  
● Optimization Models.  
● Information Retrieval/Text Mining/Data Mining.  
● Artificial Intelligent.  
● Operation Management. |
● Distributed Computing.  
● Adaptive System.  
● Multi-media Communication System. |
● Knowledge Quality.  
● Knowledge-sharing Climate.  
● Functional Diversity.  
● Virtual Teams. |
| Zhang, Jie             | [http://myprofile.cos.com/jiezhang74](http://myprofile.cos.com/jiezhang74) | ● Business applications of information technology and operations management techniques.  
● Information security policy and end-user information security behaviors. |
<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
| Adeyemi, Cheryl      | http://myprofile.cos.com/cadeyemi      | ● Semiotic Chaining as a Tool for Instructional Practice.  
● Preservice Teacher Programs.  
● Developing Algebraic Thinking Among African Americans.  
● Increasing Female Participation in Mathematics-related Careers.  
● Reflecting on Strategies Children Use to Measure Perimeter and Length.  
● The Effect of Graphing Calculators on Preservice Teachers' Attitude and Achievement Regarding Mathematics Education. |
● Device and circuit design and simulation.  
● Sensors and instrumentation.  
● Thermoelectric and solar energy devices.  
● Silicon Carbide and Gallium Nitride.  
● Materials and processing.   |
● Finite Element Modeling and Analysis. |
● Simulation and Modeling. |
● Development.  
● Assessment.  
● School Psychology. |
| Chen, Hui             | http://myprofile.cos.com/hui_chen      | ● Computational problems in Earth sciences  
● Computer systems, networking, and security areas  
● Design and analysis of wireless networks, sensor networks, caching for wireless systems, operating systems and network security  
● Applied computing |
## School of Engineering, Science, and Technology

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
● Behavioral ecology.  
● Sexual selection and mating systems.  
● Conservation biology. |
● Organic Thin Film.  
● Organic Molecular Beam Epitaxy.  
● Nonlinear optical properties of matter.  
● Biomaterials.  
● Opto-electronic materials.  
● Photonics.  
● Physics Education. |
● Intracellular Ca2+ imaging. |
● Spiritual and Religiosity and its impact on risky behaviors.  
● HIV/AIDS prevention.  
● Substance abuse prevention among minority youth.  
● Global health.  
● International psychology. |
● Police Psychology.  
● Critical Stress.  
● Forensic Psychology.  
● Testing and Assessment. |
<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
| Haile, Dawit  | http://myprofile.cos.com/dhaile | ● Graph theory.  
● Calculating connected dominating sets for efficient routing in ad-hoc wireless networks.  
● Ad-hoc networks and unit disk graphs. Cluster based routing using k-tree.  
● Determining minimal separators in chordal graphs.  
● Determining a bound on the size of critical chromatic index graphs.  
● Developing fault-based software testing techniques. |
| Harris, Toni  | http://myprofile.cos.com/tsharris | ● Academic achievement of African American undergraduate students.  
● Cultural variables related to academic achievement of African American undergraduate students. |
| Harris, Glenn | http://myprofile.cos.com/gcharris | ● Bioinformatics and comparative genomics strategies to search for the genetic factors underlying susceptibility to non-insulin dependent diabetes mellitus (NIDDM, a.k.a. type 2 diabetes).  
● QTL analysis to find candidate genes for NIDDM by incorporating information from multiple species to construct comparative genomic maps. |
● Religiosity and health.  
● Barriers to minority careers in science.  
● Psychoepistemology.  
● Time perception.  
● Problem-solving heuristics.  
● Mindful practice. |
● Engineering curriculum development. |
### School of Engineering, Science, and Technology

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</thead>
</table>
● Bioenergetics, quantification of energy budgets.  
● Biotelemetry.  
● Ecology, respirometry, behavior.  
● Effects of noise on wildlife.  
● Hematological measurements.  
● Protozoan parasite treatment.  
● Metabolic effects of parasites. |
● Bioinformatics.  
● Computational Genetics. |
● Synthesis, Characterization and Evaluation.  
● Molecular Modeling and Simulation.  
● Biological and Chemical Sensors.  
● Multifunctional Gold/iron oxide nanoparticles as optical and magnetic probes for (a) cancer cell imaging, diagnostics, and therapy or (b) for radionuclide detection and extraction. |
| Phairoh, Thongchai | http://myprofile.cos.com/tphairoh | ● Control system applications to ship roll mitigation, unmanned vehicles, robotics, and the supply chain.  
● System identification/prediction. |
| Qazi, Tariq    | http://myprofile.cos.com/tqazi | ● Complex Analysis.  
● Special Functions. |
● Systems Biology.  
● Reproductive Physiology.  
● Gene Expression.  
● Genomic Analysis. |
## School of Engineering, Science, and Technology

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<thead>
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<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
| Serpell, Zewelanji    | [http://myprofile.cos.com/zserpell](http://myprofile.cos.com/zserpell)          | ● Culture and School-Based Mental Health  
● Disruptive Behavior Disorders & School-Based Interventions  
● Cultural aspects of development  
● Social & cognitive development in African American children  
● Social Problem Solving |
● Drug resistant bacteria  
● Bacteriophage control of bacteria  
● Bacterial nitrogen fixation |
| Sheybani, Ehsan       | [http://myprofile.cos.com/esheybani](http://myprofile.cos.com/esheybani)        | ● Digital Signal processing with applications in Bioinformatics, Biomedicine,  
Sensor Processing, Wireless Communications, Data Mining and Visualization,  
and Remote Sensing. |
● Testing and improving the visualization abilities of minority engineering and  
technology students. |
| Tabanjeh, Mohammad     | [http://myprofile.cos.com/tabanjeh](http://myprofile.cos.com/tabanjeh)          | ● Algebraic and numerical computations with dense structured matrices and  
fast algorithms.  
● Complexity in the areas of matrix and polynomial computations.  
● Design and analysis of algorithms.  
● The solution of polynomial systems of equations. |
● Heterogeneous catalysis.  
● Factors controlling surface speciation and catalytic activity.  
● Material science.  
● Kinetic studies in sol-gel materials.  
● Synthesis of functionalized membrane materials. |
<table>
<thead>
<tr>
<th>Faculty</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>● Occupational Safety and Health.</td>
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<td></td>
<td></td>
<td>● Lean Manufacturing.</td>
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<td></td>
<td></td>
<td>● Production Control.</td>
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<td></td>
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<td>● Statistical Quality.</td>
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<td>● Control and Design of Experiments.</td>
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<td></td>
<td></td>
<td>● Heat/mass transfer.</td>
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<td></td>
<td></td>
<td>● Nonlinear and Chaotic Dynamics in Biosciences.</td>
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<td></td>
<td></td>
<td>● Solid-State Lasers.</td>
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<td></td>
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<td>● Optics.</td>
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<td></td>
<td></td>
<td>● General Chemistry, Liberal Arts Chemistry, Chemical Education.</td>
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<td></td>
<td></td>
<td>● LabView Programming.</td>
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<td></td>
<td></td>
<td>● Juvenile Delinquency.</td>
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<td></td>
<td></td>
<td>● Academic Performance.</td>
</tr>
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<td></td>
<td></td>
<td>● Peer Mentoring or Advising.</td>
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<tr>
<td></td>
<td></td>
<td>● Assessment and Measurement.</td>
</tr>
<tr>
<td>Ward, Sherman</td>
<td><a href="http://myprofile.cos.com/sward4">http://myprofile.cos.com/sward4</a></td>
<td>● Role of Ca2+ activity during early neural development and on the type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of neurotransmitter expressed by nerve cells.</td>
</tr>
<tr>
<td>Wimbush, George</td>
<td><a href="http://myprofile.cos.com/wimbush1">http://myprofile.cos.com/wimbush1</a></td>
<td>● Mathematics Education.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Curriculum and Instructions.</td>
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<tr>
<td></td>
<td></td>
<td>● Mathematics.</td>
</tr>
</tbody>
</table>
## School of Engineering, Science, and Technology

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<tr>
<th>Faculty</th>
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</thead>
</table>
● Nonlinear Partial Differential Equations (Elliptic Type).  
● Index Theory of Symplectic Paths for Hamiltonian System.  
● Mathematical Biology and Numerical Analysis. |
● Web-based application design and implementation.  
● Artificial Intelligence.  
● GIS.  
● Data Mining.  
● Image Processing.  
● Parallel Computing.  
● Bioinformatic. |
● Software Life Cycle.  
● Computer Information Systems.  
● Bioinformatics.  
● GIS. |
<table>
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<tr>
<th>Faculty</th>
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</thead>
</table>
● Management of Statistical Operations.  
● Evaluation of any Action Programs, Supervisory Roles, Commuting Patterns.  
● Training in population and environmental issues. |
● The Political Economy of Southern Africa.  
● Africa and the Poverty of Democratization.  
● International Political Economy.  
● Globalization and the Marginalization of the Third World. |
● Mass communication.  
● Visual communication.  
● Photography. |
● Public Finance.  
● Monetary Economics. |
● Adolescent Literature. |
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<tr>
<th>Faculty</th>
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</tr>
</thead>
</table>
                      |                                     | Managerial Economics.  
                      |                                     | International Business.  |
                      |                                     | Parental and community involvement in education.  
                      |                                     | Collaborations between institutions of higher education and public schools.  |
| Hildegard, Rissel | http://myprofile.cos.com/rissell | Golden Age Spain.  
                      |                                     | Foreign language instruction.  |
                      |                                     | Music Theory.  
                      |                                     | The Sacred Concerts of Edward Kennedy Ellington.  
                      |                                     | Higher Education Leadership/Administration.  |
                      |                                     | Social and political philosophy.  
                      |                                     | Philosophy of race.  |
                      |                                     | Public Policy.  
                      |                                     | State and Local Government.  
                      |                                     | Community Development.  
                      |                                     | Campus Security.  
                      |                                     | Emergency Management.  
<pre><code>                  |                                     | Homeland Security.  |
</code></pre>
<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
</tr>
</thead>
</table>
| Krohn, Mel         | http://myprofile.cos.com/krohn1  | ● Software applications.  
                        |                                                 | ● The design and development of web sites.                                               |
                        |                                                 | ● School organization factors influencing teacher persistence, efficacy, and mobility.  
                        |                                                 | ● Preservice teacher perceptions of culturally responsive school environments.  
                        |                                                 | ● School organization effects on student motivation to learn.  
                        |                                                 | ● Evaluation of systemic math reform programs and Professional Development Schools.  
                        |                                                 | ● Professional development of pre-service and in-service educators.  
                        |                                                 | ● Developing & use of technologies in teaching, research, and service.                  |
| Norman, James      | http://myprofile.cos.com/norman52 | ● Public school administration.                                                                                                               |
| Omotoye, Richard   | http://myprofile.cos.com/romotoye | ● Economic development and related issues (i.e. trade, poverty, debt, etc) relating to developing countries.  
                        |                                                 | ● Financial Services.                                                                   |
                        |                                                 | ● Juvenile Delinquency.                                                                  |
|                     |                                  | ● Truancy.                                                                                                                                            |
                        |                                                 | ● Economic / Social Indicators  
                        |                                                 | ● Economic democracy.                                                                   |
|                     |                                  | ● History of race and race relations / civil rights.  
<pre><code>                    |                                                 | ● Movements for social and economic justice.                                                     |
</code></pre>
<p>|                     |                                  | ● Intercultural communication / competence.                                                                                                          |
|                     |                                  | ● Speaker/lecturer on sustainable economics, history / nature of capitalism, race relations, and struggles for social / economic justice. |</p>
<table>
<thead>
<tr>
<th>Faculty</th>
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</tr>
</thead>
</table>
● International Education. |
| Saravanabhavan, Sheila  | http://myprofile.cos.com/saravanabhavan | ● Legal and ethical issues in special education.  
● Assessment of the culturally and linguistically diverse populations, attitude studies, etc. |
● Effective teacher preparation programs.  
● PDS--myth or possibility.  
● Desegregation of the public schoolhouse--moment or trend? |
| Shaffer-Gottschalk, David | http://myprofile.cos.com/davidsg | ● Interpretation for performance of piano literature from the eighteenth century to the present, including experience with twentieth-century avant-garde techniques.  
● Analysis of piano technique for ease and fluency in playing.  
● Production of a recording and restoration of a published edition of Samuel Coleridge-Taylor's 24 Negro Melodies, op. 59. |
● E-portfolio design and assessment.  
● World literature.  
● Wac/wid programs. |
● Motivational process in educational technology.  
● Cultural diversity on the Internet. |
## School of Liberal Arts and Education

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Profile Address</th>
<th>Research Interest</th>
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</thead>
</table>
● Educational administration and supervision.  
● Curriculum development, and instructional design.  
● Cultural diversity, public policy, curriculum development, and instructional effectiveness. |
● Child and family state and national policies and programs.  
● Generalist social work education.  
● Social justice teaching and advocacy. |
● The Role of Psychosocial variables on Substance Abuse among African American Women.  
● Disproportionate Minority Contact (DMC) within the CJ System.  
● The Impact of HIV and AIDS on Minority Women.  
● Impact of Sentencing Disparities on Incarcerated Offenders. |
| Wilson, Carolyn| [http://myprofile.cos.com/wilson404](http://myprofile.cos.com/wilson404) | ● Special Education, especially MR and LD.  
● Standardized and High-Stakes Assessments for students with special needs.  
● How environmental and psychological factors impact their success in school and on these tests. |