

## Sustainability Researchers

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### **Name and Department**

- 1 Aaron Covey, Facility Analyst, Arts and Science
- 2 Abhishek Dubey, Assistant Professor of Computer Engineering and Computer Science
- 3 Aimee Robinson, Program Coordinator, The Martha Rivers Ingram Commons
- 4 Akos Ledeczi, Professor for ISIS
- 5 Alan Bowers, Associate Professor of Civil and Environmental Engineering
- 6 Alexis Rodriguez, Program Coordinator, Institute for Software Integrated Systems
- 7 Alistair Sponcel, Assistant Professor of History
- 8 Allison Moore, Research Associate, Institute for Software Integrated Systems
- 9 Ally Sullivan, Executive Director, Facilities Business Operations
- 10 Amanda Carrico, Research Assistant Professor, Fellow of Vanderbilt Institute for Energy and Environment
- 11 Amanda Clayton, Assistant Professor of Political Science
- 12 Amanda Little, Department of English
- 13 Amanda R. Benson, Senior Lecturer of Biological Sciences
- 14 Amrutur Anilkumar, Professor of the Practice of Mechanical Engineering
- 15 Amy Karns, ISIS Staff Engineer
- 16 Amy Shaw, Postdoctoral Candidate, Environmental Engineering
- 17 Anand Taneja, assistant professor of religious studies
- 18 Andre Churchwell, Vice Chancellor for Equity, Diversity, and Inclusion
- 19 Andrea George, Environmental Health, Safety, and Sustainability
- 20 Andrew C. Garrabrants, Associate Research Professor of Civil & Environmental Engineering
- 21 Aniruddha Gokhale, Associate Professor for the Institute for Software Integrated Systems
- 22 Ann Tate, Assistant Professor of Biological Sciences
- 23 Ari Caramancia, Assistant Professor of Anthropology
- 24 Ashley Carse, Assistant Professor of Human and Organizational Development
- 25 Ashley Majewski, Coordinator, Division of Administration
- 26 Ayan Mukhopadhyay, Research and Development Scientist, School of Engineering
- 27 Beth Conklin, Department of Anthropology
- 28 Betsey Robinson, Associate Professor of History of Art
- 29 Bradley Hawkins, Practicum Director of MPH Program
- 30 Brooke Ackerly, Department of Political Science
- 31 Bruce Jennings, Adjunct Associate Professor in the Center for Biomedical Ethics and Society and the Department of Health Policy
- 32 Bruce Morrill, Edward A. Malloy Professor of Catholic Studies

- 33 Carl Johnson, Department of Biological Sciences
- 34 Carol Ziegler, Assistant Professor, VU School of Nursing
- 35 Carrie Johnson, Assistant Director, Student Centers
- 36 Carwil Bjork-James, assistant professor of anthropology
- 37 Cary Pint, Assistant Professor of Mechanical Engineering
- 38 Charles Powers, Professor of Environmental Engineering & Co-Director of CRESP
- 39 Chelsea Hamilton, Environmental Health, Safety, and Sustainability
- 40 Chen Gruber, Research Assistant Professor of Civil and Environmental Engineering
- 41 Chris Lowe, attorney, Office of General Counsel
- 42 Chris Vanags, Director of Research Initiatives, Peabody College
- 43 Christina Robbins, Director, Ingram Commons
- 44 Christopher Serkin, Associate Dean for Research and Professor of Law
- 45 Chuck Nicholas, Director, Procurement and Payment Services
- 46 Claire Smrekar, Associate Professor of Leadership, Policy, and Organizations
- 47 Corey Brady, Assistant Professor of Mathematics Education
- 48 Craig Philip, Research Professor of Civil and Environmental Engineering, Director, Vanderbilt  
Center for Transportation Research (VECTOR)
- 49 Curtis Byers, Professor of Civil and Environmental Engineering
- 50 Damon Varble, Building Systems Control Manager
- 51 Dan McDermet, ISIS Principal Research Engineer
- 52 Dan Morgan, Department of Earth & Environmental Sciences
- 53 Daniel Balasubramanian, Research Scientist, Institute of Software Integrated Systems
- 54 Daniel Funk, Associate Professor of Biological Sciences
- 55 Daniel Work, Associate Professor of Civil and Environmental Engineering
- 56 Darren Beville, Energy Efficiency and Metering Manager
- 57 Dave Krantz, Visiting Scholar in Vanderbilt Institute of Energy & Environment (VIEE) and Climate  
Change Research Network
- 58 David Furbish, Professor & Chair of Earth and Environmental Sciences
- 59 David Hess, Associate Director of Vanderbilt Institute of Energy & Environment, Professor of  
Sociology
- 60 David Kosson, Professor & Chair of Civil and Environmental Engineering & Co-Director of CRESP
- 61 David Owens, Clinical Professor of Management
- 62 David Schlundt, Associate Professor of Psychology
- 63 David Ter Kuile, Executive Director of Dining
- 64 David Wood, Department of Philosophy
- 65 Di Yao, ISIS Principal Research Engineer
- 66 Dmitriy Kostyuchenko, ISIS Senior Research Engineer
- 67 Douglas Adams, Distinguished Professor of Civil and Environmental Engineering, Chair,  
Department of Civil and Environmental Engineering
- 68 Douglas Fisher, Department of Electrical Engineering and Computer Science

- 69 Douglas Schmidt, Professor for the Institute for Software Integrated Systems
- 70 Ed Kinney, sourcing offer, procurement
- 71 Eric Bymaster, Associate Vice Chancellor for Finance
- 72 Eric Hall, ISIS Principal Research Engineer
- 73 Eric Kopstain, Vice Chancellor
- 74 Michael Briggs, Director of Mobility
- 75 Eugene LeBoeuf, Professor of Civil and Environmental Engineering
- 76 Eugene Vorobeychik, Assistant Professor of Computer Science and Computer Engineering
- 77 Evelyn Galletti, Directory Financial Operations and Planning
- 78 Florence Sanchez, Associate Professor of Civil and Environmental Engineering, Associate Chair of Civil and Environmental Engineering, Director of Graduate Studies in Environmental Engineering
- 79 Frank Parker, Professor of Environmental and Water Resources Engineering
- 80 Frankie King, Program Director of Research Coordination and Outreach, ISIS
- 81 Fred Eisele, ISIS System Architect
- 82 G. Kane Jennings, Professor of Chemical and Biomolecular Engineering
- 83 Gabor Karsai, Professor of Electrical Engineering, Professor of Computer Science, Associate Director of Institute for Software Integrated Systems
- 84 Gautam Biswas, Professor, ISIS
- 85 Geoff Little, Assistant Directory of Research and Prospect Development
- 86 George Hornberger, Director of Vanderbilt Institute of Energy & Environment (VIEE), Department of Civil and Environmental Engineering
- 87 Ghina Absi, Assistant Professor of the Practice of Civil and Environmental Engineering
- 88 Gregory Melchor-Barz, professor of ethnomusicology and associate professor of anthropology
- 89 Gregory Walker, Associate Professor of Mechanical and Electrical Engineering
- 90 Hamp Turner, Adjunct Professor of Civil and Environmental Engineering
- 91 Hiba Baroud, Assistant Professor of Civil and Environmental Engineering
- 92 Himanshu Neema, ISIS System Architect
- 93 Hongyang Sun, Research Assistant Professor of Electrical Engineering and Computer Science
- 94 J.B. Ruhl, Energy, Environment and Land Use Program, Vanderbilt Law School
- 95 Jack Barkenbus, Associate Director CCRN, Vanderbilt Institute for Energy and Environment (VIEE)
- 96 Jaco Hamman, Director of the Program in Theology and Practice
- 97 James Clarke, Civil and Environmental Engineering
- 98 James Dobbins, Director, Vanderbilt Center for Transportation Research

- 99 James Fraser, Associate Professor of Human and Organizational Development
- 100 James Moore, Landscape Architect
- 101 James Young, Chemical and Biomolecular Engineering
- 102 Janet Macdonald, Assistant Professor of Chemistry, Vanderbilt University
- 103 Janet Roberts, Facilities Manager, Peabody College
- 104 Janey Camp, Research Assistant Professor of Civil and Environmental Engineering
- 105 Janos Sallai, Research Scientist, Institute for Software Integrated Systems
- 106 Janos Sztipanovits, Director of ISIS
- 107 Jason Scott, Research Project Manager, Institute for Software Integrated Systems
- 108 Jayne M Morris, Assistant Director, Commencement
- 109 Jeff Henry, ISIS Computer Systems Analyst
- 110 Jennifer Bischoff, Finance Director, Vice Provost Support
- 111 Jermaine Soto, Director of Faculty Development, Office of Faculty Affairs
- 112 Jessica L Oster, Assistant Professor of Earth and Environmental Sciences
- 113 Jesus Gomez-Velez, Assistant Professor of Civil and Environmental Engineering
- 114 Jim Rossi, Professor of Law, Energy, Environment and Land Use Program
- 115 Joe Bandy, Center for Teaching, Sociology, Peabody College
- 116 Joerg Rieger, Department of Theological Studies, Divinity School
- 117 John Ayers, Professor of Earth and Environmental Sciences
- 118 Jonathan Gilligan, Department of Earth & Environmental Sciences
- 119 Joseph Hite, ISIS Research Engineer
- 120 Jules White, Assistant Professor, Institute for Software Integrated Systems
- 121 Julie Covington, Associate Director of Architecture, Campus Planning and Construction
- 122 Kaitlin Toner Raimi, CCRN/VIEE Postdoctoral Research Fellow
- 123 Kane Jennings, Chair of the Department of Chemical and Biomolecular Engineering
- 124 Kate Bennett, student services, Owen Graduate School of Management
- 125 Katherine Donato, Professor of Sociology
- 126 Kathleen L. Wolff, Instructor at the School of Nursing
- 127 Kathleen Seabolt, Director, child and Family Center
- 128 Kathy Gould, Department of Cell and Developmental Biology, Vanderbilt Medical School
- 129 Katie Dey, ISIS Staff Engineer
- 130 Keija Hu, Assistant Professor of Operations Management, Owen Graduate School of Management
- 131 Keith Meador, director of the Center for Biomedical Ethics and Society
- 132 Kelli Fager, Senior Director, Purchasing and Payment Services
- 133 Kenneth Wallston, Vanderbilt University School of Nursing
- 134 Kevin Brown, Research Associate Professor of Civil and Environmental Engineering
- 135 Kevin Murphy, Andrew W. Mellon Professor of the Humanities and professor of the history of art

136 Kip Viscusi, University Distinguished Professor of Law, Economics, and Management  
137 Kristin Torrey, Director of Greek Life  
138 Larisa DeSantis, Associate Professor of Earth and Environmental Science  
139 Laurie Woods, lecturer in sociology  
140 Leah Dundon, Director, Vanderbilt Climate Change Initiative  
141 Leigh Shoup, Health and Wellness  
142 Leslie D. Kirby, Director of Undergraduate Studies & Senior Lecturer in Psychology  
143 Levi Dyer, Purchasing Agent, Procurement and Payment Services  
144 Lily Claiborne, Director of Undergraduate Studies for the Department of Earth and Environmental Science  
145 Lin Meng, Earth & Environmental Sciences  
146 Linda Reichenberger, Assistant Director, Special Events  
147 Lindsey Gannon, Assistant Director of Mobility  
148 Lisa Bressman, Environmental Law Program, Vanderbilt Law School  
149 Lisa Fiorentino, Assistant Director, Real Estate  
150 Lori Troxel, Associate Professor of the Practice of Civil and Environmental Engineering  
151 Lori Ungurait, Executive Secretary, Facilities Business Operations  
152 Mabel Gergan, Assistant Professor of Asian Studies (South Asia)  
153 Margaret Emley, Director, Real Estate  
154 Maria Luisa Jorge, Assistant Professor of Earth & Environmental Science  
155 Marian Rushdy, ISIS Research Engineer  
156 Mark A. Cohen, Owen Graduate School of Management  
157 Mark Abkowitz, Professor of Civil and Environmental Engineering  
158 Martin Salamone, Assistant Director, Student Athletics  
159 Mary Metelko, ISIS System Architect  
160 Matt Buckley, Assistant Director, Custodial Services, Vanderbilt University  
161 Matthew Cushing, Bicycle and Pedestrian Planner  
162 Matthew Lang, Professor of Chemical and Biomolecular Engineering, Professor of Molecular Physiology and Biophysics  
163 Matthew Zaragoza-Watkins, Assistant Professor of Economics  
164 Meagan Sargent, Project Manager, Campus Planning and Construction  
165 Michael Bess, Professor of European Studies, Vanderbilt University  
166 Michael Vandenberg, Director of Climate Change Research Network (CCRN), Environmental Law Program, Vanderbilt Law School  
167 Michelle Marcus, Assistant Professor of Economics  
168 Mike McDonner, Plant Operations  
169 Mike Perez, Associate Vice Chancellor, Chief Facilities Officer  
170 Mirian Leibowitz, Commute Concierge Manager  
171 Molly Miller, Department of Earth & Environmental Sciences

- 172 Nagabhushan Mahadevan, ISIS System Architect
- 173 Naveeduddin Mohammed, ISIS Research Engineer
- 174 Neil Kelly, Assistant Professor of Earth and Environmental Science
- 175 Ofra Klein-BenDavid, Adjunct Professor of Civil and Environmental Engineering
- 176 Ole Molvig, Assistant Professor of History and of Communication of Science and Technology
- 177 Patrica Helland, Associate Dean of Students, Vanderbilt University
- 178 Patrick Trent Greiner, Assistant Professor of Sociology,
- 179 Patrik Meijer, ISIS Senior Research Engineer
- 180 Peter Volgyesi, Research Scientist, Institute for Software Integrated Systems
- 181 Paul Stobb, Professor of Communication Studies, American Studies, and Communication of Science and Technology
- 182 Philippe Fauchet, Dean of the School of Engineering
- 183 Rachel Harrell, Vanderbilt Law School
- 184 Rae Torres, Faculty Assistant, Vanderbilt Law School
- 185 Ralf Bennartz, Professor of Earth and Environmental Science
- 186 Ralph Bruce, Professor Electrical Engineering and Computer Science
- 187 Randy Hurt, Plant Engineer, Facilities
- 188 Ravindra Duddu, Civil and Environmental Engineering
- 189 Richard Chotard, Office of General Counsel
- 190 Richard Speece, Centennial Professor of Civil and Environmental Engineering, Emeritus
- 191 Riyaz Latif, Mellon Assistant Professor of History of Art
- 192 Rizia Bardhan, Assistant Professor of Chemical and Biomolecular Engineering
- 193 Robert Daniels, ISIS System Architect
- 194 Robert Grajewski, Executive Director Vanderbilt Innovation Center
- 195 Robert Joel Barnett, Associate Professor of the Practice of Mechanical Engineering
- 196 Robert Laddaga, Research Professor, Institute for Software Integrated Systems
- 197 Robert Owens, ISIS System Architect
- 198 Robert Stammer, Associate Professor of Civil and Environmental Engineering, Vanderbilt University
- 199 Robert W. Pitz, Professor of Mechanical Engineering, Vanderbilt University
- 200 Ron Emeson, Professor of Pharmacology, Biochemistry, Molecular Physiology and Biophysics, Psychiatry and Behavioral Sciences, Directory of the Vanderbilt Brain Institute, Vanderbilt University
- 201 Rossane Delapp, Senior Research Engineer of Civil and Environmental Engineering
- 202 Ryan Trahan, Research Associate Professor in the Program in Climate and Environmental Studies
- 203 Ryszard Wycisk, Research Associate Professor of Chemical and Biomolecular Engineering, Vanderbilt University

204 Sally Parker, Senior Assistant Provost  
205 Samuel Dolbee, Assistant Professor of History  
206 Sandep Neema, Research Scientist, Institute for Software Integrated Systems  
207 Sandra Rosenthal, Jack and Pamela Egan Chair of Chemistry, Vanderbilt University  
  
208 Sankaran Mahadevan, Professor of Civil and Environmental Engineering  
  
209 Sara Maddox, Assistant Director of ISIS  
210 Sara Safransky, Assistant Professor of Human and Organizational Development, Vanderbilt University  
211 Scott Glasgow, Senior Special Events Coordinator, Vanderbilt University  
212 Shanmuga Sundaram, Assistant Vice Chancellor, Information Technology, Vanderbilt University  
213 Shawn Goodman, Director Investment Office, Vanderbilt University  
214 Shihong Lin, Assistant Professor of Civil and Environmental Engineering, Vanderbilt University  
  
215 Shitanshu Mishra, Research Associate, Institute for Software Integrated Systems  
  
216 Simon Darroch, Assistant Professor of Earth and Environmental Science, Vanderbilt University  
217 Stacey Crowhurst, Director of Finance and Administration, Vanderbilt University  
218 Stephen Rees, ISIS Principal Research Engineer  
219 Steve Ertel, Vice Chancellor for Communications  
220 Steve Gild, Environmental Health, Safety, and Sustainability  
221 Steven Goodbred, Professor of Earth and Environmental Sciences, Vanderbilt University  
222 Steven Krahn, Professor of the Practice of Nuclear Environmental Engineering, Vanderbilt University  
223 Suzanne Herron, Sustainability Manager, Dining Services  
224 Tamas Kecskes, ISIS Senior Research Engineer  
225 Tasha Rijke-Epstein, Assistant Professor of History  
  
226 Taylor Johnson, Assistant Professor, Institute for Software Integrated Systems  
  
227 Ted Bapty, Research Associate Professor, Institute for Software Integrated Systems  
228 Teresa Goddu, Director of American Studies, Vanderbilt University  
229 Thushara Gunda, postdoctoral researcher CEE  
  
230 Tom Dillehay, Senior Research Professor of Anthropology  
231 Tom Howard, Facilities Manager, Athletics, Vanderbilt University  
232 Tyler Nelson, Voice Department, Blair School of Music

- 233 W. Kip Viscusi, Law & Economics Program, Vanderbilt Law School
- 234 Weiming Xiang, Research Associate, Institute for Software Integrated Systems
- 235 William Robinson, Assistant Professor, Institute for Software Integrated Systems
- 236 Xenofon Koutsoukos, Professor Electrical Engineering and Computer Science, Vanderbilt University
- 237 Yolanda McDonald, Assistant Professor, Department of Human Organization and Development, Vanderbilt University
- 238 Yuche Chen, Research Assistant Professor of Civil and Environmental Engineering, Vanderbilt University
- 239 Zdravka Tzankova, Associate Professor of Sociology, Vanderbilt University
- 240 Zhenkai Zhang, Research Scientist, Institute for Software Integrated Systems

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## Research Topics

Manage and analyze facilities data for the College of Arts and Science at Vanderbilt  
smart grids

Zero Waste Advisory Committee Member

computer science education, wireless sensor networks, and model integrated computing

environmental chemistry, modeling of water and wastewater treatment processes, and role of uncertainty in

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex systems

history of coral reef science, the history of underwater listening, and the history of Polynesian explanations for problem-based learning and formative assessment in classroom settings

lead the fiscal, administrative and business services that support the institution-wide Facilities organization

interest in the behavioral dimensions of environmental conservation and adaptation to environmental change

(1) how legislative institutions – most notably the adoption of electoral gender quotas – shape the substantive representation of women’s interests and priorities in national legislatures; (2) how exposure to women

officeholders affects citizen behavior; (3) gender differences in citizens’ political preferences, attitudes and

journalist writing about the environment and innovation and professor of investigative journalism and science

population genetics, plant biology, evolution and conservation biology

aero-propulsion, energy conversion, and microgravity materials processing

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex systems

Large Scale Renewable Energy Advisory Committee Member

religious and cultural traditions of South Asia, specializing in the anthropological study of contemporary Islam,

Indian popular culture, and inter-religious relations between Muslims and Hindus

Sustainability Advisory Committee Member

Development, management, and coordination of sustainability and environmental compliance programs across

the academic campus and medical center, strategic planning efforts to promote the long-term sustainability of fate and transport of contaminants from wastes, sediments and soils in subsurface environments, leaching

methods and assessment approaches, management of residuals from energy production, beneficial reuse of

fault tolerant and real-time middleware; cyber physical systems; model driven engineering

infectious disease ecology and evolution, ecological immunology, life history evolution, and mathematical

how resilient farming systems emerge and adapt to climate change and natural disasters. My fieldwork takes

place on the north coast of Peru, where I study ancient irrigation in arid farming zones.

global dimensions of community development, environmental politics and sustainability, and the social

Zero Waste Advisory Committee Member

multi-agent systems, robust machine learning, and decision-making under uncertainty

anthropology of the body, religion and ritual, health and healing, death and mourning, the politics of indigenous rights, and ecology, environmentalism, and cultural and religious responses to climate change

research at the Corinth Excavations of the American School of Classical Studies at Athens, focusing on water

assessing and to characterizing environmental parameters that contribute to chronic exposures in communities

while addressing population health to decrease exposures to environmental hazards

global justice, including human rights and climate change

ethics and political theory in relation to policy, health, and environmental issues

liturgy and sacraments, drawing upon a range of interdisciplinary resources in the fields of systematic and

historical theology, ritual studies, cultural anthropology, and biblical studies

cellular and molecular biology of biological clocks

development and integration of effective models that align community adaptation to climate stress with carbon mitigation policy, focusing on the role of primary care providers in environmental health, Sustainability Advisory  
Zero Waste Advisory Committee Member

political, ethical, and legal tensions that surround resource extraction projects pursued by “post-neoliberal” energy materials and technology, nanomaterials, sustainability and CO2 conversion, and manufacturing  
Understanding and improving the technical, social and regulatory interface for nuclear waste management; the integration of environmental regulatory regimes and the implications of such integration for more cost-effective sustainability outreach, awareness and education while also collaborating with the various sustainability and integration of advanced geochemical reactive transport modeling with experiments designed to understand underlying fundamental processes. His current research focusing on water-rock-cement interaction along carbonate rocks and cement interfaces and how it might affect cement integrity and the fate of radionuclide  
He advises the university on academic arrangements, real estate transactions, construction agreements, and connecting primary scientific research to novel educational experiences with the goal of increasing the STEM operational planning, budgeting, and assessment of initiatives across multiple units, enhancing collaboration and land use and property law

Zero Waste Advisory Committee Member

School Equity

mathematical and computational modeling; on learning environments that foster representational fluency and expressivity; and on activities that promote collaborative and collective learning for classroom groups  
transportation and other complex network systems; infrastructure funding and operational management; water resource management

Structural design, building use

Utility Master Plan Participant

real-time operating systems, secure communications

geomorphology, geochronology, Sustainability Advisory Committee Member

symbolic execution, code analysis

ecological specialization; phylogenetic diversification; molecular evolutionary genetics; herbivorous insect

transportation cyber physical systems, transportation data analytics, traffic estimation & control, connected & autonomous vehicles, mathematical models of traffic, inverse modeling, mobile sensing

Utility Master Plan Participant

problem solving, especially decision making, multiple goals, risky and inter-temporal choice, and especially on social goals

geophysics

politics of industrial transitions, especially factors that lead to a more sustainable economy and society and factors that lead to stasis in transition policies, Sustainability Advisory Committee Member

waste management and environmental remediation that allows new understanding of the fundamental behavior of chemical and radionuclide contaminants in wastes, engineered systems and the environment to impact major product development, creativity, innovation, entrepreneurship

social, emotional, and environmental influences on eating, exercise, and smoking behavior

leads the award-winning Campus Dining program, which includes 21 campus locations, 42 managers and a staff  
the ways in which climate change gives new significance and urgency to traditional ethical, political and trade studies and integration activities in system-level vehicle designs.

(alumni)

nonlinear structural dynamics and vibrations, structural health monitoring/diagnostics and damage prognosis, noise and vibration control, applications in aerospace and automotive systems, applications in energy systems  
artificial Intelligence, particularly machine learning

mobile cloud computing, distributed real-time and embedded middleware, cyber-physical systems, software creates, protects and promotes the Vanderbilt University brand through strategic partnerships and activities that will advance the visibility of the university, safeguard the integrity of the brand, and increase trademark licensing  
Utility Master Plan Participant

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex systems.

Sustainability Advisory Committee Member

Sustainability Advisory Committee Member

environmental and water resources engineering, hydropower optimization and management, sustainability engineering, environmental security, and contaminant fate and transport applied to groundwater, soil, and adversarial machine learning and data mining, data-driven agent-based modeling, economics of data sharing, game theoretic modeling of security and privacy, cyber-physical system security

Capital planning, projects, and operations

Chemo-mechanical behavior and long-term performance of cement-based composites; Nanoscale behavior and nanomodification of cement and concrete materials; 3D printing of infrastructure materials;

Mechanical/chemical/energy responses at material interfaces; Nanoscale interfacial interactions and dynamics in Hazardous Waste Engineering, Radioactive Waste Management, Water Quality Management

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex systems

Collaborative engineering systems, reducing delays and lost audit trails between engineers.

molecular design and fabrication of smart surfaces and materials, many of which mimic, replicate, or employ

Model-driven software and system development, model-integrated computing, distributed and resilient software platforms, verification and assurance of autonomous systems

Modeling and analysis of Cyber Physical Systems, Model-based Diagnosis, Data Mining for Diagnosis, Intelligent Learning Environments, Educational Data Mining, Integrated Planning, Scheduling, Control, and Resource

Vanderbilt Blue Sky energy initiative, fundraising

how hydrological processes are affected by humans and in how human behavior is affected by hydrological processes, Sustainability Advisory Committee Director

risk and reliability of hypersonic structures

medical ethnomusicologist who has engaged field research in Uganda, Rwanda, Kenya, South Africa, and Tanzania

micro-scale heat transfer, heat flux measurement, energy transport processes, ultrasonic pyrometry,

thermographic phosphors, energy conversion devices, high-performance computing

Waste management, modeling, remediation, and associated risks

Critical infrastructure systems modeling, risk analysis, statistical modeling, risk-informed decision analysis,

Heterogeneous simulation integration, modeling and simulation, cloud computing, model-integrated computing, design-space exploration, artificial intelligence, planning and scheduling

broad area of improving performance, energy efficiency (green computing, thermal-aware computing), and reliability (resilience, fault tolerance) of High-Performance Computing (HPC), cloud computing, and distributed

environmental, natural resources and property law, and also studies the legal industry and legal technology,

Environment and energy, science and technology, foreign policy and security

formation of pastoral leaders, the narratives of Scripture, psychology of religion, psychodynamic theory, play studies, and humanity's deepening relationship with technology

Chemical and nuclear waste management, human health and ecological risk assessment, sustainable and resilient approaches to the remediation of contaminated sites, long term stewardship of legacy hazardous and Marine transportation, marine engineering

urban redevelopment, particularly how cities remake themselves in response to globalization and how citizens  
Environmentally friendly landscape design

metabolic engineering; systems biology; diabetes, obesity and metabolic disorders; tumor metabolism;

synthesis of nanoparticles and nanostructured materials

Utilities and facilities management

interactions of nature and man-made systems utilizing geospatial technologies

Wireless sensor networks, localization and tracking

Embedded software, Structurally adaptive systems, Model-integrated computing

Large-Scale Software/System Integration, Real-time System Verification, Model Integrated Computing

Coordinating special programs related to campus and commencement

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber

physical systems, education technology, smart mobility, modeling and analysis of complex systems

Finance and accounting

Professional development in higher education, leader of training and workshops.

Paleoclimatology, Low Temperature Geochemistry, Cave and Karst Studies

Environmental flow and transport, groundwater-surface water interactions, watershed hydrology, analytical and administrative and energy law topics, role of public utility doctrines and principles in modern energy markets, as well as federalism and other shared jurisdictional issues affecting agency regulation

ways that social movement organizations have responded to the economic changes associated with globalization, especially the efforts of U.S. and Mexican labor and environmental movements to forge coalitions

Sustainability Advisory Committee Member

Geochemistry, Experimental Petrology, Sustainability Science

Environmental Policy, Risk Management, Atmospheric Science, Global Climate Change

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex systems

Big Data Science and Engineering, Cyber-physical Systems

Sustainable building practices, Utility Master Plan Participant

how social motivations can promote or prevent sustainable behaviors, how people explain away harmful behaviors, how people compare their own beliefs and behaviors to those of other people, and how people's molecular design and fabrication of smart surfaces and materials, many of which mimic, replicate, or employ

Zero Waste Advisory Committee Member

how environmental stressors affect migration from communities in southwestern Bangladesh

focus on diabetes and other chronic diseases that are best managed with behavioral and lifestyle change

promoting activities, programs and resources aligned to Vanderbilt's guiding principles

Sustainability Advisory Committee Member

Drupal system administration, Drupal theming maintenance, content management services, quality assurance testing, reporting and documentation, strategy development.

service management and sustainability management

intersections of religion and health and empirical research regarding socio-cultural determinants of illness,

Environmentally preferable purchasing and sourcing, Sustainability Advisory Committee Member

the psychological, behavioral, and physiological effects of having individuals disclose their thoughts and feelings in writing about particularly stressful or traumatic events that they have experienced, effects of public service

Life-cycle risk evaluation, model integration, and waste management issues related to proposed advanced

nuclear fuel cycles and cementitious barriers for nuclear applications

historicism in France and the United States, both with respect to new design based on historic precedents and with regard to the preservation of historic sites

individual and societal responses to risk and uncertainty, including risky behaviors, government regulation and Zero Waste Advisory Committee Member

Vertebrate Paleontology, Paleoecology, Paleoclimates

Criminology, Contemporary Social Issues, Human Ecology, Men and Women in American Society

practicing environmental attorney with the law firm of Beveridge & Diamond, P.C., and holds a research appointment in environmental engineering at the Vanderbilt University School of Engineering

management of the Vice Chancellor's office, and coordinating special projects and assignments related to key

initiatives. Has served as lead project manager for the creation of the FutureVU Land Use Plan, a comprehensive psychological issues in sustainability, specifically barriers to people acting more sustainably, positive emotions, particularly the use of positive emotional experiences as a buffer against stress

Zero Waste Advisory Committee Member

Igneous Petrology, Geochemistry, Geoscience Education

understanding the response of terrestrial ecosystems to natural and anthropogenic changes

Special Events for Vanderbilt Alumni for the University.

Mobility and Transportation

Administrative law, constitutional theory, statutory interpretation

Manage, negotiate, and coordinate Vanderbilt real estate projects

structural engineering and sustainable design

Zero Waste Advisory Committee Member

postcolonial environmentalism, Tribal/Indigenous theorization, anti-colonial politics, and race and ethnicity in

Management of real estate portfolio, Utility Master Plan Participant

Movement Ecology, Trophic Interactions, Conservation Biology

design, programming, and app development

Law and economics, government regulation, white-collar and corporate crime, and environmental management and sustainability, Sustainability Advisory Committee Member

Risk management, risk assessment, infrastructure resilience, freight transportation, spatial analysis, disaster

Zero Waste Advisory Committee Member

Development of a resilient information architecture platform for smart grid application on a distributed cyber

Campus waste and recycling, operational activities of the Vanderbilt University campus recycling program,

Mobility and Transportation

Biological motors, cell signaling and immunology

intersection of industrial organization, energy and the environment, design and performance of economy-wide

Campus planning and construction, Utility Master Plan Participant

History of the social and ethical implications of technological change; twentieth-century European history

Environmental and energy law, relationship between formal legal regulation and informal social regulation of individual and corporate behavior

intersection of health and environmental economics, quantifies the health impacts of exposure to environmental toxins and explores the roles that governmental policy and increased information can play in mitigating these

Utility Master Plan Participant

Responsible for providing a well-maintained and sustainable campus, oversees the planning, program

management and implementation of best practices for all aspects of campus facilities and grounds, operations, maintenance, utilities and construction as well as real estate initiatives, Sustainability Advisory Committee

Mobility and Transportation

relationship between soft-bodied animals and physical and biologic components of their environment, and how this relationship has changed through the Phanerozoic

resilient cyber-physical systems, model-based systems health management, real-time diagnosis, verification and validation of diagnosis systems and paradigms for assessing performance degradation and system reliability in Designing, developing and maintaining frameworks for open-ended computer-based learning environments and Paleontology, Paleoecology, Macroevolution, Marine Reptiles

"Cement-carbonate rock interaction under saturated conditions: From laboratory to modeling."

Faculty Committee of Climate and Environmental Studies. Explores how science, technology and society interact.

Organizational Management, Strategic Planning, Non-Profit Management, Service Learning, Instructional Design, how various forms of inequality emerging from social, political, and economic structures pattern socio-environmental outcomes in ways that are often detrimental to environmental systems and harmful to Modelling tools, UX/UI design and implementation, software engineering.

wireless sensors, low-power hardware design, software-defined radios, signal processing, and sensor fusion.

Faculty Committee of Climate and Environmental Studies. Intersection of rhetoric and intellectual culture, with particular emphasis on the Gilded Age and Progressive Era in the United States

photonics, energy, and the semiconductor/biology interface, all using silicon-based nanoscience and

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Atmospheric Physics, Clouds and Climate, Arctic and High Latitudes, Meteorological Satellite Remote Sensing

Energy and Natural Resources, Nano Science and Technology

Energy Efficiency in utility production, distribution, and use, Utility Master Plan Participant

developing advanced physics based models for materials and material phenomena; formulating robust and accurate numerical methodologies; and implementing efficient algorithms for parallel computing

Risk and insurance management, compliance, BlueSky initiative

anaerobic Biotransformation of hazardous pollutants oxygenation of rivers and lakes

Environmental awareness and programming projects on campus

Nano Science and Technology, Energy and Natural Resources, Biomedical Imaging and Biophotonics,

Model integrating computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex systems

Welding and welding controls, weld pool thermal and fluid modeling, sensor development, machine-vision-based quality control systems, robotic weld-path programming and robotic welding, alternative fuel engines, technical Welding and welding controls, weld pool thermal and fluid modeling, sensor development, machine-vision-based quality control systems, robotic weld-path programming and robotic welding, alternative fuel engines, technical model integrated computing, software integrated systems

Application development, Mechanical design/analysis process/methodologies improvements, Software Highway and Pedestrian Safety, Crash Investigations, Traffic Engineering, Transportation Systems Design, Human Factors, and Multi-modal Freight

Laser diagnostics, laminar & turbulent combustion, turbulence-chemistry interaction, pollutant formation, supersonic combustion, gas turbine combustion, rocket propulsion, Raman scattering, laser-

Molecular neurobiology, RNA editing, Alternative splicing, Generation of receptor diversity and function

"Cement-carbonate rock interaction under saturated conditions: From laboratory to modeling."

technological transitions, with specific expertise in electricity and sustainability

Energy conversion and storage; membranes and separators from functional polymers and composites.

Utility Master Plan Participant

environmental historian of the Ottoman Empire and the modern Middle East, with interests in Model Integrated Computing, Large Scale Systems Integration, Design Space Exploration, Embedded synthesis, structure, and optical spectroscopies of semiconductor nanostructures. Applications of materials include lighting and display technologies. Particularly interested in applying nanocrystals in Structural mechanics, materials durability, reliability and risk engineering, structural health diagnosis and prognosis, computational model uncertainty, optimization under uncertainty

Model integrated computing, smart cities, distributed object computing, network embedded systems, cyber-physical systems, education technology, smart mobility, modeling and analysis of complex Urban and environmental studies, decolonial theory, critical race studies, feminist geography, social movements, and participatory research

Planning and development

Stable, efficient, secure IT infrastructure

Sustainable investments

Membrane Processes, Water-Energy-Environment Nexus, Environmental Surface Science, Environmental Application and Implication of Nanotechnology

Learning science, educational technology, computing education research, collaborative learning, collaborative problem solving and development of technology-enhanced learning-teaching

Paleoecology of mass extinctions and major events in Earth History, Geobiology of the Precambrian-Cambrian boundary, Biogeography and the preservation potential of biotic gradients

financial analysis, budgeting, forecasting, capital planning, and workflow improvements for Capital Web application development, traffic management, electronics, control systems, security

Sustainability Advisory Committee Member

Gather and calculate data related to Vanderbilt's sustainability initiatives, such as recycling, waste disposal, greenhouse gas emissions, fuel and energy use, alternative transportation use, and other Sedimentary systems, Quaternary environments, Coastal, marine, and deltaic processes

Nuclear and environmental policy and regulation; risk assessment and risk management; operational readiness and technology insertion in nuclear facilities; the nuclear fuel cycle.

Zero Waste Advisory Committee Member

Model Integrated Computing, Visual Modeling

Faculty Committee of Climate and Environmental Studies. Material transformations of everyday life in Madagascar and the southwestern Indian Ocean. Her work explores how people have reworked the material developing formal verification techniques and software tools for cyber-physical systems (CPS) with goals of improving CPS safety, reliability, and security, while advancing fundamental results and applying techniques and tools from hybrid systems, formal methods, control theory, software model integrated computing, software integrated systems

Environmental humanities

Security of water, food, energy, and waste resources, Natural resource planning, development, and management, Integration of physical and social science research

Change and development of prehistoric complex societies, particularly Peru and Chile, South America, prehistory, colonialism and ethnography. Ethnohistory and ethnography: South America

Facilities and event management

Sustainability Advisory Committee Member

Regulation of health, safety, and environmental risks; law and economics; tort liability; risk and uncertainty  
Developing theories of control and verification for hybrid systems and applying them to complex cyber-physical  
Cyber physical systems, risk and reliability

Big data science and engineering, risk and reliability, cyber and physical systems, sensor networks

where and why health disparities exist using geographic information science (GIS) theory and methods informed  
by environmental and social justice frameworks and the theory of intersectionality; Sustainability Advisory  
Sustainable transportation (system modeling & physical-based powertrain simulation), Air quality and health  
impacts of mobile emissions (modeling & fieldwork), Energy, environmental and societal impacts of autonomous  
Environmental Policy and Regulation, Environmental Movements and ENGO Strategies, Corporate  
Cyber-Physical Systems, Embedded and Real-Time Systems, Automotive Control Systems, Formal Verification,  
Binary Analysis, Co-Simulation, Software Security, Hardware Security

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