

Full-time, Tenure-track Faculty Position in Data Analytics for Innovation in the Circular Economy  
Department of Sustainable Biomaterials, Virginia Tech, Blacksburg, Virginia

<https://listings.jobs.vt.edu/postings/92638>

The Department of Sustainable Biomaterials at Virginia Tech ([sbio.vt.edu](http://sbio.vt.edu)) is seeking applicants for a faculty position in data analytics for innovation in the circular economy. This position can be filled at the assistant or associate professor level. This is a full-time, tenure-track position available August 2019.

### **Position description**

The [Department of Sustainable Biomaterials](#) in the [College of Natural Resources and Environment](#) at Virginia Tech is seeking applicants for a tenure-track position at either assistant or associate professor level to lead efforts in renewable materials innovation that drive sustainable and circular economies of the future. Materials are the primary resource societies need to make the products we live in, work in, and use every day. Innovations in materials, products, and services that are designed to move from a linear “cradle to grave” economy to one that is more circular (cradle to cradle) are critical for sustainable economic development. Our ability to manage and control objects in the physical world electronically is growing exponentially and represents a tremendous opportunity in rethinking the way we innovate to unlock the circular economy potential. The aim of this position is to expand the Department of Sustainable Biomaterials’ expertise in data-based decision making in the areas of sustainable business practices and operations, as well as in entrepreneurship and innovation commercialization. This is a regular nine-month appointment, with approximately 50 percent research and 50 percent teaching.

Appointment to the rank of assistant or associate professor carries with it the duties of conducting research, seeking and maintaining external funding, and teaching undergraduate and graduate courses that expands expertise in emerging innovation opportunity areas for circular economies. Successful applicants will also be required to participate in program areas within Virginia Tech’s transdisciplinary [Data and Decisions](#) community.

### **Required Qualifications**

- Ph.D. in any technical, engineering, decision science, or business-related discipline.
- Demonstrated ability in the following areas:
  - Developing and sustaining a nationally recognized research program.
  - Teaching a minimum of two undergraduate courses and one graduate course.
  - Mentoring graduate and undergraduate students.
  - Contributing to an environment that nurtures collaboration among students, faculty, staff, and industry partners from diverse ethnic, cultural, and socio-economic backgrounds.
- Applicants for the associate professor rank are expected to be nationally recognized as a leader in their teaching, research, and service.

### **Preferred Qualifications**

- Specific expertise sought includes, but is not limited to, life-cycle assessment, systems dynamics, circular economies, industrial ecology, design thinking for sustainability, biomimicry, renewable

biomaterials, renewable energy systems, sustainable bioengineering, big data, and the internet of things.

- Also preferred is teaching and research experience that applies technologies such as geographic information systems, knowledge management, artificial intelligence, autonomous devices, and other emerging “big data” technologies applied to study materials innovation, use, movement, disposal, reuse, and recycling in today’s rapidly changing global environment.

### **Application Process**

Candidates must apply online at [listings.jobs.vt.edu/](http://listings.jobs.vt.edu/).

Application materials should include the following information:

- Curriculum vitae
- Cover letter expressing a statement of interest in the position
- Separate statements of research and teaching interests
- Names, titles, and complete contact information for three references

An official transcript for highest degree earned is required prior to the start of employment for the selected candidate.

Questions and inquiries may be addressed to Dr. D. Earl Kline ([kline@vt.edu](mailto:kline@vt.edu)), chair of the search committee.

Application review will begin January 21, 2019, and continue until the position is filled. The start date for the position is no later than August 10, 2019.

### **Equal opportunity/affirmative action statement**

Virginia Tech does not discriminate against employees, students, or applicants on the basis of age, color, disability, sex (including pregnancy), gender, gender identity, gender expression, genetic information, national origin, political affiliation, race, religion, sexual orientation, or veteran status, or otherwise discriminate against employees or applicants who inquire about, discuss, or disclose their compensation or the compensation of other employees or applicants, or on any other basis protected by law. For inquiries regarding non-discrimination policies, contact the Office for Equity and Accessibility at 540-231-2010 or Virginia Tech, North End Center, Suite 2300 (0318), 300 Turner St. NW, Blacksburg, VA 24061.

### **About Virginia Tech**

Virginia Tech, founded in 1872 as a land-grant institution, is currently ranked as a Top 25 Public University by U.S. News & World Report and a Top 25 Public Research University by the National Science Foundation. Through a combination of its three missions of learning, discovery, and engagement, Virginia Tech continually strives to accomplish the charge of its motto: *Ut Prosim* (That I May Serve). As the commonwealth’s most comprehensive university and its leading research institution, Virginia Tech serves a diverse population of 30,000+ students and 8,000+ faculty and staff from over 100 countries, and is engaged in research around the world.

Virginia Tech's main campus is located in the New River Valley, nestled in the heart of the beautiful Appalachian Mountains. [Blacksburg](#) offers the charm of a small town combined with the modern conveniences of a metropolitan area, and is a short driving distance from abundant public land, including the Monongahela, George Washington, and Jefferson National Forests and Shenandoah National Park.

Virginia Tech is dedicated to [InclusiveVT](#)— serving in the spirit of community, diversity, and excellence. We seek candidates who adopt and practice the Principles of Community, which are fundamental to our ongoing efforts to increase access and inclusion, and to create a community that nurtures learning and growth for all of its members. Virginia Tech actively seeks a broad spectrum of candidates to join our community in preparing leaders for the world.

### **About the College of Natural Resources and Environment**

The College of Natural Resources and Environment, one of nine college units at Virginia Tech, was established in 1992. The college is composed of four academic departments (Fish and Wildlife Conservation, Forest Resources and Environmental Conservation, Geography, and Sustainable Biomaterials), serving more than 1,000 undergraduate students. The college has about 180 faculty and staff, including 75 tenure track faculty. More than 300 graduate students are enrolled in our programs, which include both an online master of natural resources degree and a cohort-based executive degree in the National Capital Region. The college's Advising Center, with dedicated professional academic advisors assigned to each department, works in partnership with faculty mentors focused on student success and the college's director of employer relations.

Faculty research awards total \$15-20 million annually in the college's research-intensive, student-centered environment. Two of our departments are among the top 10 academic departments at Virginia Tech in average research dollars awarded annually, and the college ranks second among colleges at Virginia Tech in research expenditures per FTE. The college hosts several NSF centers as well as numerous other research and outreach centers engaged with state and federal agencies and the private sector. The college manages a nearly 1,300-acre forest located close to campus that is utilized on a weekly basis for student learning and research, as well as a forestry research site in Critz, Virginia. College Factual has ranked the college as No. 1 for the study of natural resources and conservation for four consecutive years. The forestry degree program is ranked No. 1 by College Factual for the second consecutive year, and the packaging systems and design degree program is ranked No. 7 among the top 20 programs nationally by Value Colleges.

### **About the Department of Sustainable Biomaterials**

The Department of Sustainable Biomaterials was established in 1979 and is one of the largest programs in North America. It currently has nearly 200 undergraduate students, and its 18 faculty average nearly \$2 million research dollars annually. In 2012, the department adopted its current name to better reflect the faculty's expertise, and, in 2014, established two separate degree programs. The sustainable biomaterials degree (which reflects our past wood science program) continues to focus on teaching the fundamentals of the processing, manufacturing, drying, and marketing of wood and other biomaterials. The packaging systems and design degree emphasizes the importance of the sustainable use of packaging materials (packaging and pallets remain the largest use of wood fiber in the country), how packaging can enhance product performance and markets, and how new uses of wood fiber can be used to replace petroleum based plastics. The department houses two major industrial-affiliated research

centers, the Wood Based Composite Center and the Center for Packaging and Unit Load Design. The department has one of the largest wood products extension programs in the country, and extension specialists cover all aspects of wood manufacturing, drying, secondary processing, business management, and marketing.