Assistant Professor, Water Quantity/Irrigation Engineering
Department of Biological Systems Engineering

College of Agriculture & Life Sciences
Virginia Polytechnic Institute and State University

The Department of Biological Systems Engineering (BSE) at Virginia Tech invites applications for a 9-month, tenure-track, faculty position (50% research/50% extension) at the assistant professor rank with focus in **Water Quantity/Irrigation Engineering**. We seek candidates who are interested in providing resources to Virginia citizens to help them optimize use of a finite amount of quality water in the production of crops, including specialty crops such as ornamentals, fruits, and vegetables, and in urban landscape management. The successful candidate will be expected to develop and implement an integrated research/extension program addressing areas such as the following: impacts of climate change and climate variability on water resources; development of robust remote-sensing networks to quantify water use and improve irrigation scheduling; water saving techniques/technologies; irrigation management strategies to maximize crop water use efficiency; practices to limit off-site losses of sediment and agrochemicals (e.g., drainage water management); water collection/reuse for irrigation; and recommendations for conventional and deficit irrigation regimes for temperate and humid subtropical climates found in Virginia and the mid-Atlantic United States.

Maintenance and appropriate allocation of adequate water supplies is an important concern to Virginia, which maintains a >$55 billion/year agricultural industry while urban areas continue to expand in several dense, metropolitan areas (Richmond, Hampton Roads, Northern Virginia). The demand for quality ground- and surface-water supplies is likely to grow in all sectors due, in part, to increasing demand for potable water to supply an expanding population, increasing agronomic and ornamental crop production, and maintaining urban landscaping. As demand increases, water availability may decrease as a result of climate change and more climate variability. Increased competition for limited water supplies drives the development of more sophisticated, management-intensive irrigation technologies. Virginia needs expertise in water supply and irrigation engineering to assist in developing improved/innovative irrigation systems and in communicating effective irrigation water management strategies and techniques to a broad audience.

The BSE department is a diverse, dynamic, and rapidly expanding unit that includes faculty members conducting cutting-edge research in Watershed Science and Engineering and Bioprocess Engineering, while implementing crucial extension programming through Virginia Cooperative Extension. The BSE department is affiliated with two nationally ranked colleges: the College of Engineering and the College of Agriculture and Life Sciences. The department has close collaborations with the many faculty, departments, and institutes across the university and state that are involved in water-related programs. The successful candidate will build on and expand these relationships throughout the state.

Specific responsibilities are to develop and implement a nationally-recognized research/extension program, seek external funds, actively participate in graduate education by recruiting and advising graduate students, and participate in department, college, university, and professional service and outreach. The incumbent will be expected to secure competitive grants, establish a strong publication record, and support scholarly programs in both research and extension.

A Ph.D. degree in a relevant engineering or science discipline is required, and preference will be given to candidates with at least one degree in engineering. Candidates should demonstrate excellent oral and
written communication skills and have the clear ability to work well with faculty/peers across related disciplines, government entities, water supply stakeholders, and the general public. Preference will be given to candidates with a demonstrated record of peer-reviewed publications, extramural funding, extension/outreach excellence, and experiences and interests in culturally diverse groups.

Apply online at [www.jobs.vt.edu](http://www.jobs.vt.edu) (job posting TR0150003). Review of applications will begin on February 28, 2015 and will continue until the position is filled. Applicants must complete the faculty application online and upload (1) a cover letter, (2) curriculum vitae, (3) a research statement describing current research and future plans, and (4) an extension statement describing extension experience and future plans, and (5) names and contact information for three references.

Direct inquiries to Dr. Cully Hession, Search Committee Chair and BSE Professor, chession@vt.edu, 540-231-9480 or Dr. Mary Leigh Wolfe, BSE Department Head, mlwolfe@vt.edu, 540-231-6092.

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