

## MS/PhD research assistantships available at the University of Tennessee

### Position Summary

The Center for Renewable Carbon (CRC) at the University of Tennessee-Knoxville (UTK) is recruiting 2-3 graduate students who are interested in low-carbon sustainable materials in the following areas:

- (1) Biological (e.g. plants) applications of nanocellulose: MS (2 years) or PhD (3 years);
- (2) Nanocellulose reinforced plastic composites for large-scale 3D printing: PhD (3 years);
- (3) High-performance natural fiber reinforced plastics for structural applications: PhD (3 years).

These opportunities include a fully paid Graduate Research Assistantship (GRA) for 2-3 years, including stipend, health insurance and tuition. Accepted candidates will graduate with a MS/PhD degree awarded by the School of Natural Resources (by default) or an Engineering (e.g. Biosystems Engineering, Materials Science & Engineering) program (**Note: degrees are possible only after the advisor obtains joint appointments**). The position is expected to start in Fall 2023 or Spring 2024.

### Minimum Requirements

- Strong interest in cellulose materials and their applications.
- An earned Bachelors or Master's degree (preferred) in forest products (e.g. pulp, wood), chemistry/chemical engineering, materials science, mechanical engineering, or closely related fields.
- Applicants whose native language are not English must submit official TOEFL (minimum 80 IBT) or IELTS (minimum 6.5) scores to UTK.
- Excellent communication and written skills.

### Desired qualifications

- Research experience in natural fibers, nanomaterials, composites.
- Publication records.
- Independent, diligent, collaborative, curious and responsible.
- The GRE is recommended but not required for admission.



### About the Center for Renewable Carbon

The Center for Renewable Carbon (CRC) is an internationally recognized leader in the development of new and/or improved bioenergy sources, biorefinery processes, bioproducts, and biomaterials that coordinates the science, knowledge transfer, and trains the workforce required to develop a sustainable and economically viable bioeconomy. The CRC has over 10 faculty members across various departments. It also has state-of-the-art equipment for biomass fractionation, analytical characterization, organic chemistry, and material fabrication and characterization. Additional nanoscale and functional evaluation can be performed at the core facilities at the Institute for Advanced Materials and Manufacturing, in the University of Tennessee. Ph.D. students at CRC have a good track record for graduating in about 3 years.

### About UTK



UTK is situated in the heart of Knoxville, a vibrant and welcoming city that offers a range of cultural attractions, outdoor activities, and excellent dining options. Knoxville is known for its lively downtown, with the historic Market Square serving as the hub of the city's social scene. In addition to the city's cultural offerings, UTK students have access to Oak Ridge National Lab (ORNL), one of the largest science and energy national labs in the United States. ORNL offers unique research and educational opportunities, allowing UTK students to collaborate with world-renowned scientists and engineers (**such opportunities depend on funding situation, candidate's background, etc.**). Just a short drive away from Knoxville is the Great Smoky Mountain National Park, which offers stunning natural beauty and recreational opportunities such as hiking, camping, and fishing. UTK is well-known for its top-tier sports program (NCAA D1), with a rich history and dedicated fan base. With a vibrant city, top-notch research opportunities, and access to some of the country's most beautiful natural wonders, UTK is an ideal place to pursue graduate studies.

### Screening Process

Interested applicants should send their degree transcripts and CVs to Dr. Lu Wang (nfwanglu@gmail.com). Note "MS/PhD assistantship application (plus interested research direction)" at the subject line. The selected candidates will be interviewed prior to applying.