Ph.D. in Biosystems Engineering

Principal Investigators: Drs. Nicole Labbé and Nourredine Abdoulmoumine
Degree Duration: Three years Start Date: Available immediately
Salary: commensurate with experience ($20,000-21,000 plus tuition, fees and insurance)

The department of Biosystems Engineering and Soil Science and the Center for Renewable Carbon (CRC) are seeking a highly motivated Ph.D. student to join our dynamic and exciting research group. The PhD student will work closely with faculty in the Biosystems Engineering and Soil Science Department and the Center for Renewable Carbon (CRC) and will have access to a wide range of well-equipped, state-of-the-art research facilities with tools in thermochemical conversion, catalyst synthesis and evaluation and process techno-economic analysis.

Applications are invited from candidates who hold or expect to hold a master’s degree in a field relevant to the following project - Two-step pyrolysis process applied to used railroad ties & utility poles

Project description: The selected PhD applicant will work on a project aiming to develop an economically and environmentally viable pyrolysis process to upgrade used treated wood by extracting wood preservatives for recycling and converting the wood into an upgraded intermediate useful for biofuels, bioproducts, power, and heat production.

Minimum duties and responsibilities:
Duties and responsibilities include, but are not limited to:
• managing and carrying out all activities relevant to your research project
• enrolling and successfully completing advanced courses
• writing scientific articles and your PhD dissertation
• preparing and delivering presentations in national and international scientific meetings
• mentoring undergraduate students on projects linked to main research activities

Minimum qualifications:
The candidates must have:

- obtained a Master's degree in Biosystems engineering, other (agricultural, chemical, mechanical) engineering or a similar degree with an academic level equivalent to the master's degree in Engineering prior to the starting date
- fluency in English and excellent communication and writing skills

**Preferred qualifications:**

We are looking for a highly motivated individual with prior knowledge and/or experience in biomass thermochemical conversion processes (pyrolysis, gasification etc.) and process analysis software (Aspen Plus, Aspen HYSY etc.).

**Key criteria for the assessment of applicants:**

- Professional qualifications relevant to the PhD project (preference will be given to applicants with practical experience in thermochemical conversion of biomass)
- Writing skills as demonstrated by previous publications in peer-reviewed journals, reports, proposals etc.
- The grade point average achieved and other relevant work or professional experience
- English language fluency as determined by phone or skype interview, as well as interpersonal skills

**Location:** University of Tennessee, Knoxville, TN

**Research Units:** Center for Renewable Carbon (CRC)

Biomass Thermochemical Conversion & Upgrading Lab in the Department of Biosystems Engineering & Soil Science

**What to do if interested?** E-mail Dr. Labbé (nlabbe@utk.edu) or Dr. Abdoulmoumine (nabdoulm@utk.edu) with CV and brief statement of interest including relevance of past experiences.