

## **Graduate Assistantship at the School of Forest Resources, University of Maine**

A graduate research assistantship is available at the School of Forest Resources (SFR), the University of Maine in the area of sustainable mass timber building systems to support one (1) highly qualified M.Sc. or Ph.D. students to start in January or June 2020. The overall research will focus on investigating the hydrothermal performance of innovative thermally-insulated mass timber panel walls to reduce the energy consumption of new mass timber buildings and existing old residential and/or commercial buildings. The specific research details will align with the successful candidates' experience, education, and interest. Research will be conducted at the Energy Testing Lab of SFR at UMaine.

### **Qualifications:**

Students with a background in one of the following disciplines are encouraged to apply:

- Wood science/Technology/Engineering or Forest Products/Forest Engineering;
- Materials science/Engineering (with a focus on low-density insulation or structural materials);
- Industrial or Construction Engineering (with a focus on timber building materials); and
- Structural or Civil Engineering (with a focus on timber structures).

The ideal candidate is expected to have knowledge in bio-based materials (including wood fiber insulation materials), thermodynamics, and/or heat and moisture transport in materials. Some research experience in using COMSOL's Multiphysics, WUFI, or other similar software to simulate or calculate the coupled heat and moisture transport and energy consumption in wall assemblies is highly desirable, but it is not a requirement. In addition, the ideal applicant is a team worker, has a high level of intellectual curiosity, and can work independently.

For the Master's student, a B.Sc. degree in one of the above disciplines is required. For the Ph.D. student, an additional M.Sc. degree in one of the above areas is required. Excellent written and verbal communication skills are required. GRE scores are used as reference. International students must have acceptable TOEFL scores or equivalent.

### **Assistantship:**

An annual stipend (about \$21,000) paid in 12 monthly installments plus half the Annual Health Insurance fee and full tuition waiver (up to 9 credits per semester) will be provided for an expected 20 hours per week appointment. Operating funds for conducting research and travel for attending the conference will also be available.

### **About the University of Maine School of Forest Resources (SFR, <http://forest.umaine.edu>):**

With almost 90% of the state covered by forest, forest resources are central to Maine's quality of life and economy. The SFR provides essential forestry education and research and is a signature area of the University of Maine. Over 40 graduate students are currently enrolled in M.F., M.S., and Ph.D. programs within the SFR. The University has over 12,000 students and is the state's flagship research institution.

**About the Energy Testing Laboratory of the School of Forest Resources (SFR,  
<https://forest.umaine.edu/news-resources/sfr-outreach/energy-testing-laboratory/>):**

Based in the School of Forest Resources, the Energy Testing Laboratory provides technical analysis of forest-based biomass materials to researchers and solid biomass fuels manufacturers throughout the region. Serving as the only accredited pellet fuel testing lab in the Northeastern U.S., the Energy Testing Laboratory provides performance and quality evaluation of pelletized fuels, such as energy value and pellet durability, to manufacturers under ALSC/PFI certification. Expanded feedstock testing services include combustion efficiency for biomass energy consumers, particle size screen, wood species identification, loss on ignition analysis, and biomass composition.

**How to apply:**

Interested candidates should send a copy of their statement of purpose, CV, contact information of three references, transcripts and TOEFL/GRE scores to Dr. Ling Li at [ling.li@maine.edu](mailto:ling.li@maine.edu).