



## **1<sup>er</sup> colloque annuel du Centre d'étude de la forêt**

### **CONFÉRENCIER INVITÉ**



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#### *Tree Biomechanics: Theory and Practice*

Engineers as well as plant biologists have long been fascinated with the mechanical "architecture" of trees, because of the lessons that can be learned from studying structures that can achieve the largest living size on land by deploying one of the most complex "building materials" known (wood). The lecture will focus on the engineering theory that has been used to understand this kind of architecture and its basic building material. It will (1) review the system of mechanical stresses that develop in trees as a consequence of self-loading (under gravity) as well as the dynamic forces exerted by wind-pressure and drag, (2) the three basic theories attempting to describe optimal tree shape for coping with these stresses (all of which are fundamentally wrong), and (3) recent data indicating that the manner in which trees partition their biomass into leaves, stems, and roots is shared by a host of other kinds of plants, including aquatic algae and siphonous (unicellular) organisms.

**Mercredi 28 mars 19h30**  
**Amphithéâtre du pavillon Sherbrooke (SH-2800) de l'UQAM**