# Call for Abstracts

ASME 2015 Applied Mechanics and Materials Conference, McMAT2015
http://www.asmeconferences.org/mcmat2015/

June 29 – July 1, 2015

## Track: Symposium 12, Modeling of Vascular Tissues

Location: Seattle, Washington at the Motif Hotel near Seattle Downtown Waterfront

Symposium Organizers: Sevan Goenezen (sgoenezen@mengr-tamu.org) & Arun Srinivasa (asrinivasa@tamu.edu), Texas A&M University, College Station, TX.

**Description**
Advances in medical imaging has made it possible to extract patient specific geometry of the vasculature utilizing computed tomography (CT) scans, magnetic resonance imaging (MRI), or ultrasound imaging. Simultaneously, the tremendous increase in computational performance in recent decades has led to extensive research in computational models of the in-vivo vasculature to compute the wall stresses, strains, material properties, etc, that may have important medical applications in assessing the risk of vascular diseases and failure modes. However, current approaches are dominated by uncertainties, thus limiting the application to assess the risk of an aneurysm or plaque rupture. The proposed mini-symposium addresses these model uncertainties and will bring together researcher to present their state of the art modeling efforts. In particular, the mini-symposium will address constitutive modeling efforts for vasculature. Topics to be addressed include, inferring the anisotropic and heterogeneous nature of the arterial wall layer, unknown pre-stressed states, as well as differences between diseased sections. Furthermore, the material properties may vary between individuals and correlate with age, gender, external environmental factors (for example tobacco use or heavy alcohol consumption). The aim of the mini-symposium is to bring investigators together addressing any of the above discussed challenges.

**Objectives**
Authors and presenters are invited to participate in this event to expand international cooperation, understanding and promotion of efforts and disciplines in the area of Modeling of Vascular Tissues. Dissemination of knowledge by presenting research results, new developments, and novel concepts in Modeling of Vascular Tissues will serve as the foundation upon which the conference program of this area will be developed.

**Abstract Submission**
Authors should submit a 400 word text only abstract on the McMat2015 website by **February 23, 2015**. For assistance with submitting your abstract online, please email toolboxhelp@asme.org.

Conference Chair: Junlan Wang, University of Washington

Technical Program Co-chairs: Xi Chen, Columbia University; Pradeep Sharma, University of Houston.