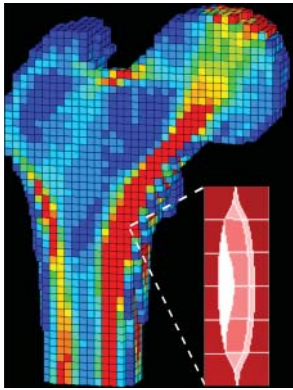




Image by Joyce Keyak and
Maria-Grazia Ascenzi



The first workshop on

Bone Tissue: Hierarchical Simulations for Clinical Applications

April 21-23, 2010 at UCLA

Call for Abstracts - due December 1, 2009

Submission requirements can be found online: <https://www.ipam.ucla.edu/programs/bone2010>

Submit to Maria-Grazia Ascenzi at mgascenzi@mednet.ucla.edu

BTHSCA1 aims to bring together orthopedic surgeons, clinicians, system biologists, mechanical and software engineers, and applied mathematicians to share the latest findings and formulate a plan to develop the next generation of three-dimensional multi-scale virtual rendering of bone tissue able to address specific clinical issues. The need for this workshop is based on:

- ▶▶ the increasing evidence that bone shows a plethora of divergent characteristics through a hierarchically-organized heterogeneous structure that varies across nano- micro- , and macro- length scales; and
- ▶▶ the highly interdisciplinary nature of hierarchical modeling, based on developments that occur independently across multiple scientific disciplines and address phenomena manifested at the different scales.

Workshop topics will include:

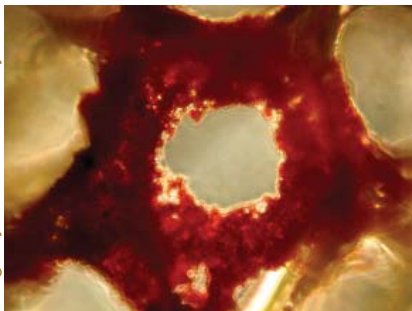
- ▶ Multiscale approaches to clinical issues
- ▶ Scale transition in bone simulation
- ▶ Fracture prediction in multiscale systems
- ▶ Pattern recognition and/or data mining in collected data
- ▶ Interactions between non-biological materials and bone tissue

More information: <https://www.ipam.ucla.edu/programs/bone2010>

Early registration by January 15, 2010

Residents and junior investigators, and women, underrepresented minorities and individuals with disabilities are encouraged to apply. **Scholarships will be awarded to the first author of the nine most meritorious abstracts.**

Image by Gwendolen Reilly



Keynote Speakers

David Burr, Professor at Department of Orthopedic Surgery, Indiana University School of Medicine

Marjolein van der Meulen, Professor of Mechanical and Aerospace Engineering, Cornell University

Nico Verdonschot, Professor of Orthopedic Surgery and Traumatology, Radboud University

Organizing Committee

Maria-Grazia Ascenzi (UCLA/Orthopedic Hospital Department of Orthopedic Surgery), **John S. Adams** (UCLA/Orthopedic Hospital Department of Orthopedic Surgery), **Elena Cherkav** (Department of Mathematics, University of Utah), **Paul C. Dechow** (Professor of Biomedical Sciences, Texas A&M Baylor College of Dentistry), **Eve Donnelly** (Mineralized Tissues Laboratory, Hospital for Special Surgery), **Gwendolen Reilly** (Engineering Materials, University of Sheffield)