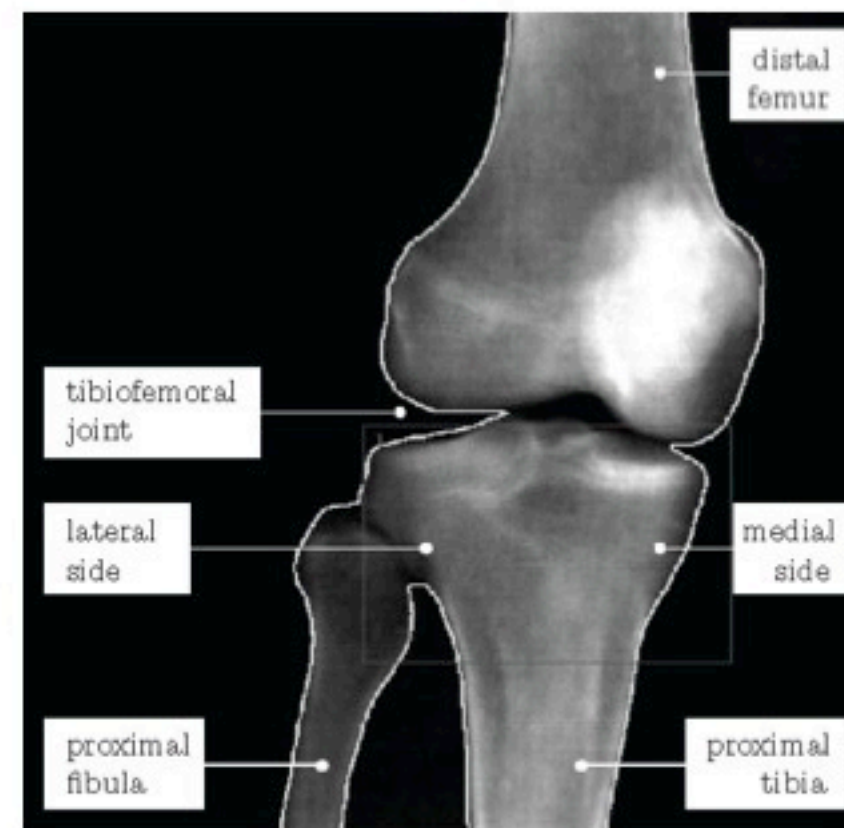
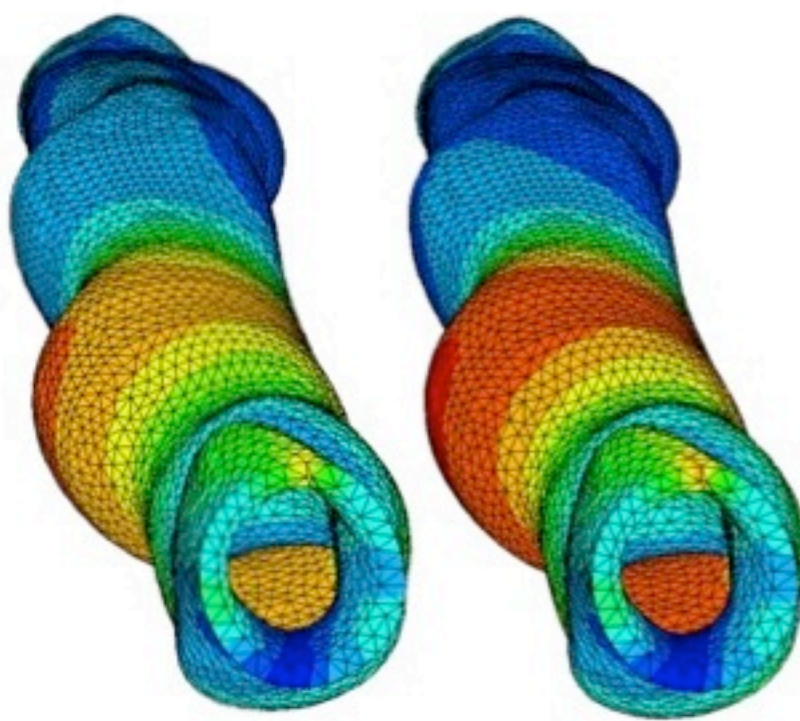
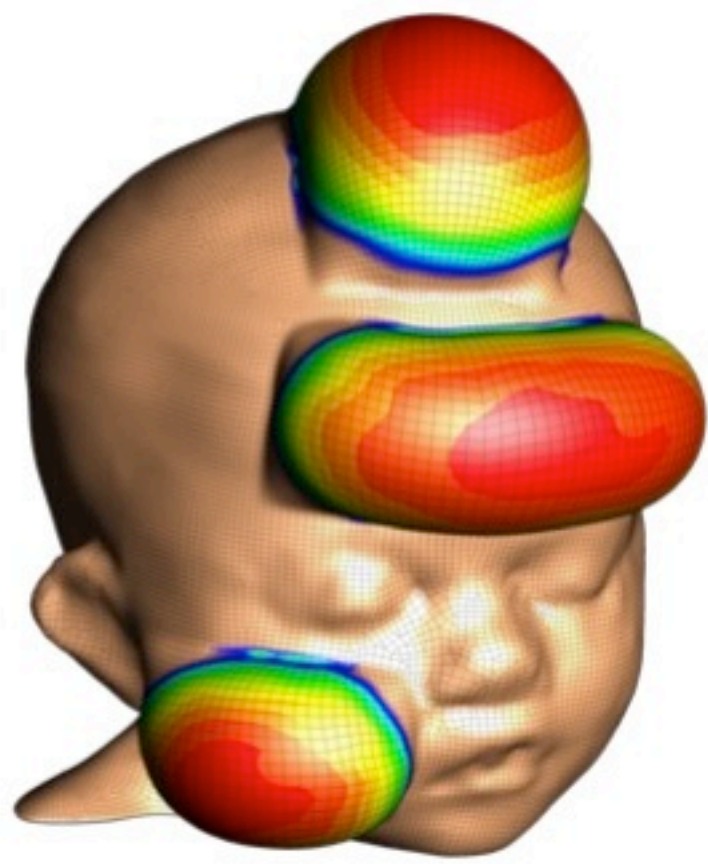
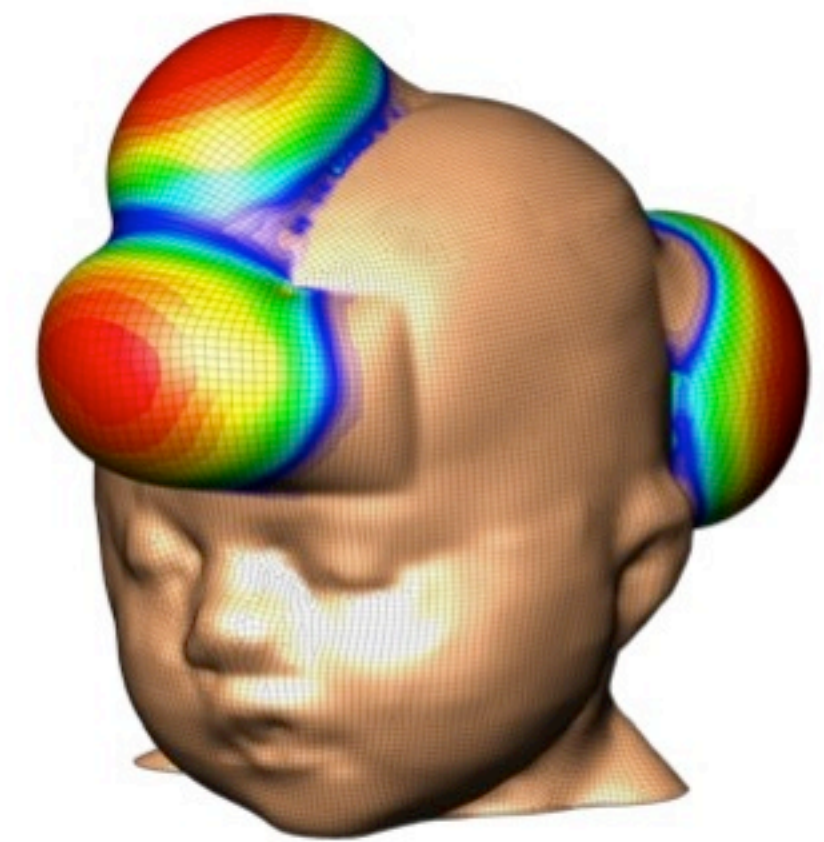
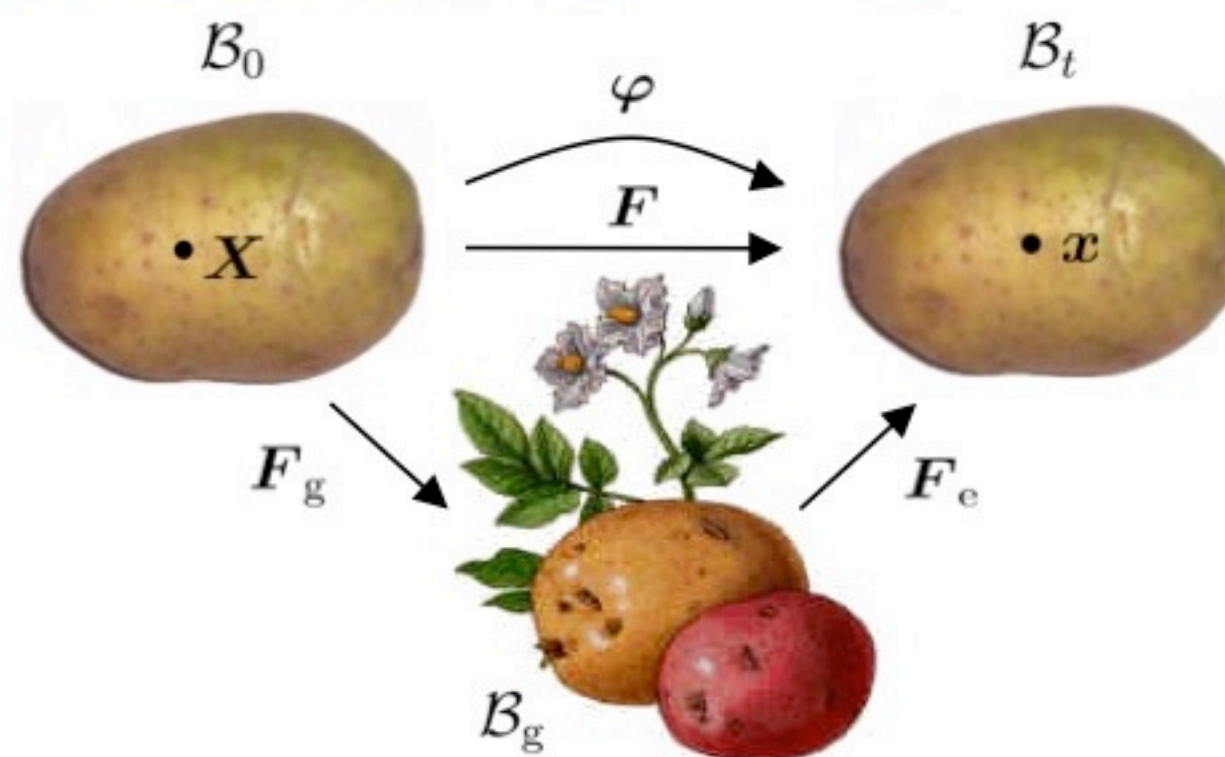
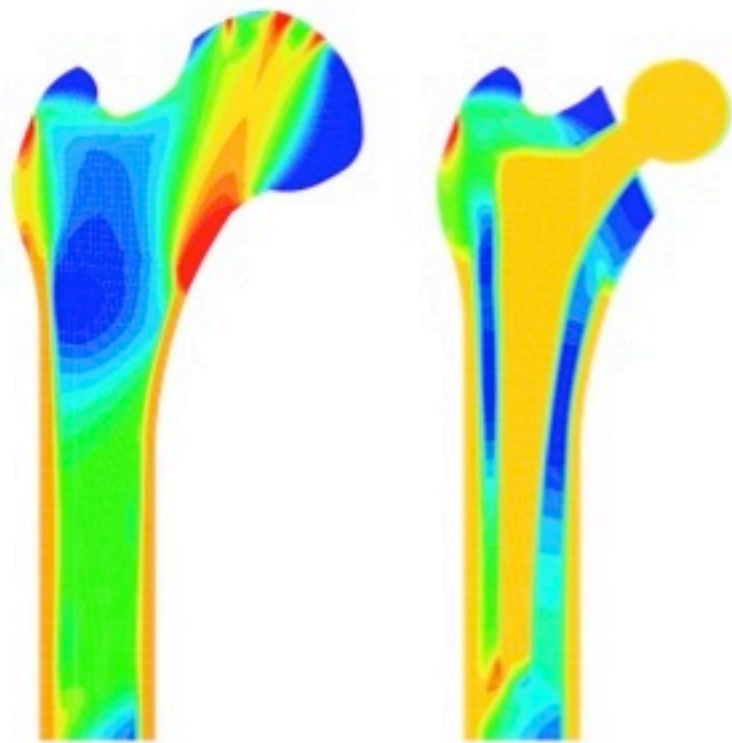
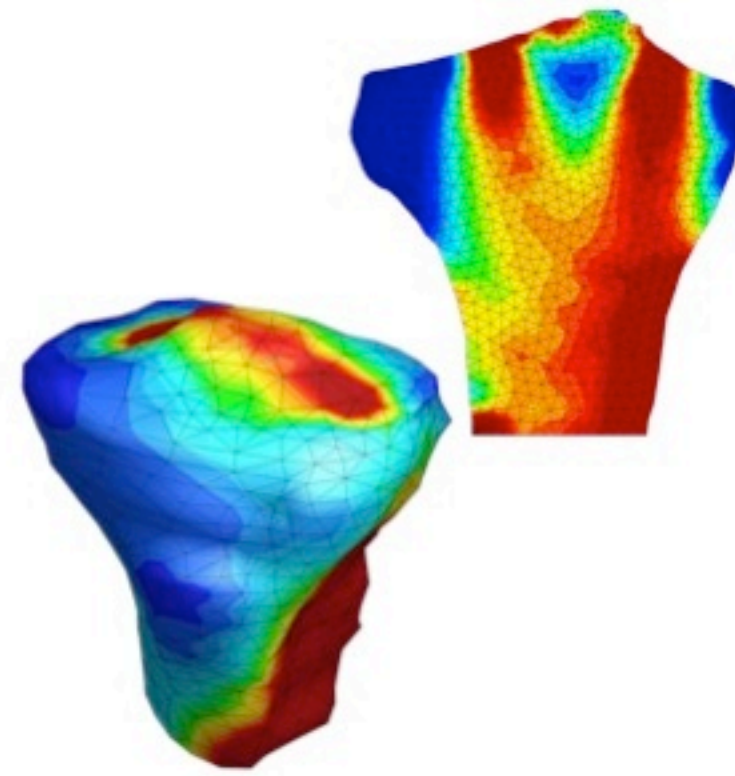
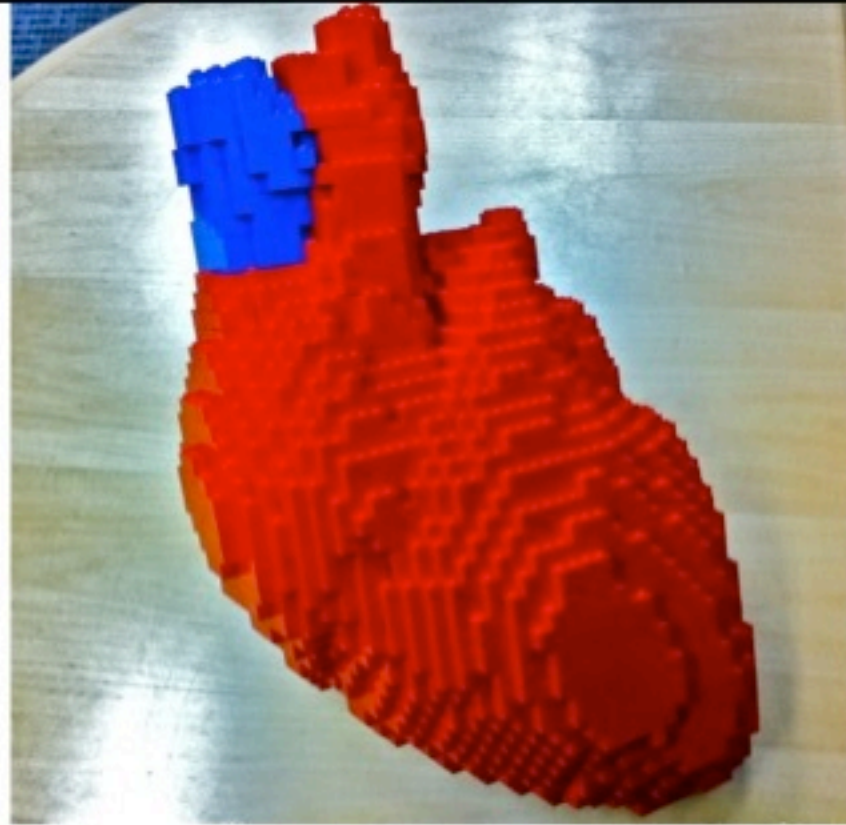


course announcement winter 2015

me337 mechanics of growth

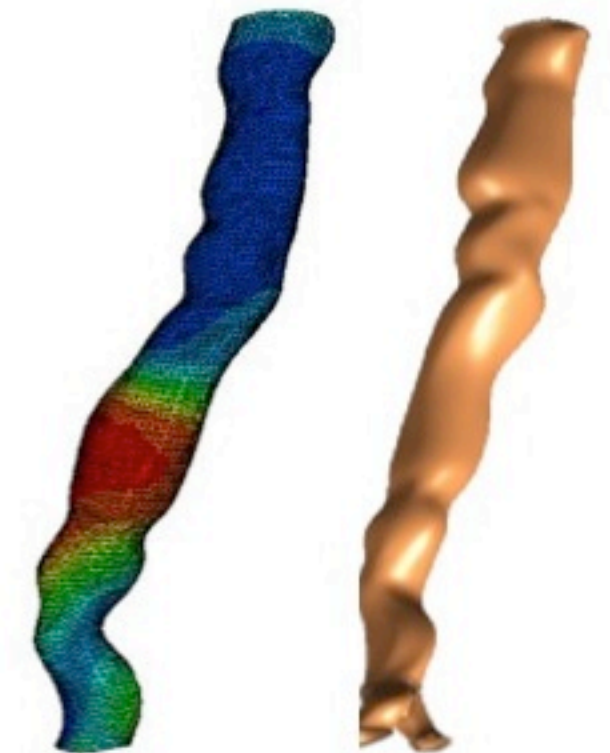
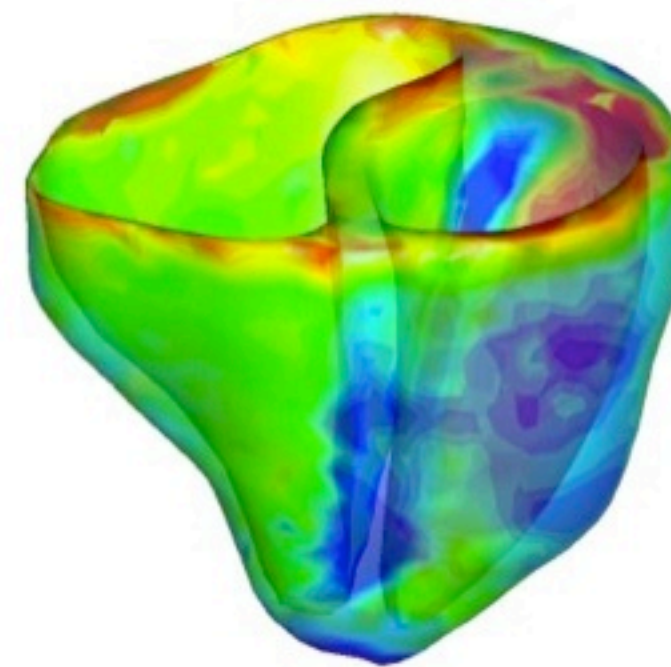
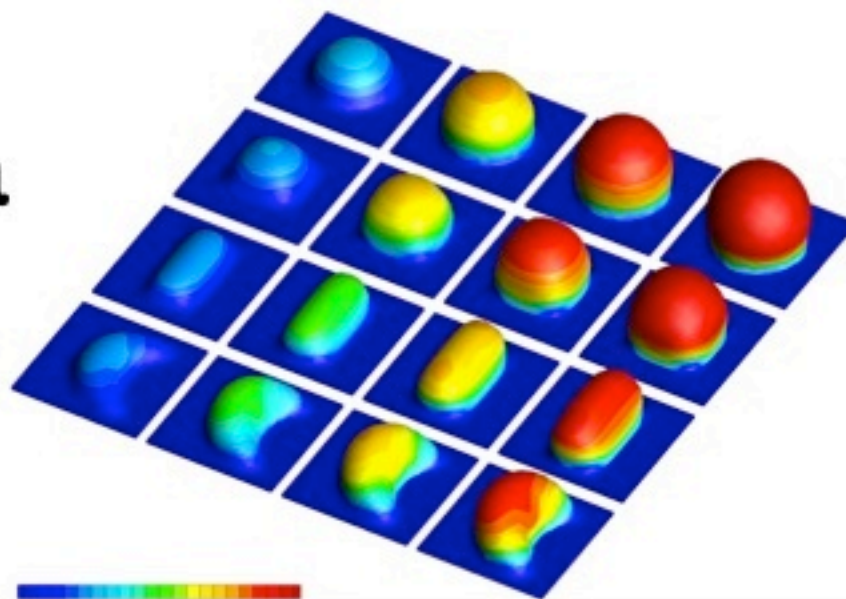
a project-based course on growing tissues and scientific writing

winter 2015
me 337
tue / thu
11:00 - 12:15
530/127



**kinematics of
finite growth
balance
equations
growth laws
finite elements**

**bone growth
tumor growth
arterial growth
skin growth
muscle growth
cardiac growth**



class papers from previous final projects

[1] pang h, shiwalkar ap, madormo cm, taylor re, andriacchi tp, kuhl e. computational modeling of bone density profiles in response to gait: a subject-specific approach. *biomech mod mechanobio*, doi:10.1007/s10237-011-0318-y.

[2] buganza tepole a, ploch cj, wong j, gosain ak, kuhl e. growing skin - a computational model for skin expansion in reconstructive surgery. *j mech phys solids*, 2011;59:2177-2190.

[3] taylor re, zheng c, jackson rp, doll jc, chen jc, holzbaur krs, besier t, kuhl e. the phenomenon of twisted growth: humeral torsion in high performance tennis players. *comp meth biomech biomed eng*. 2009;12:83-93.