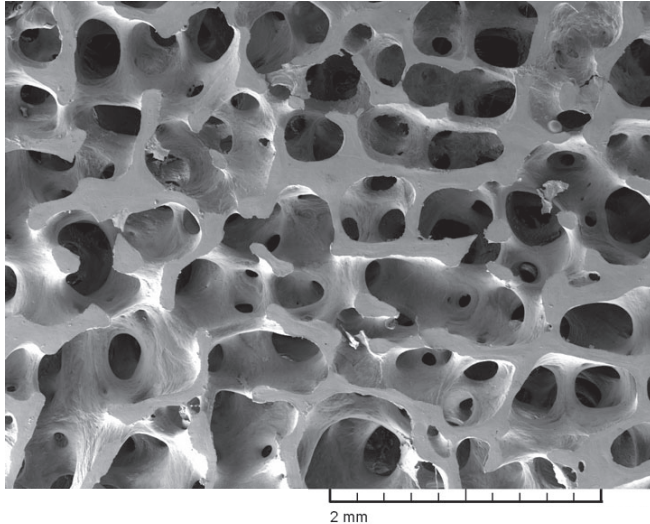


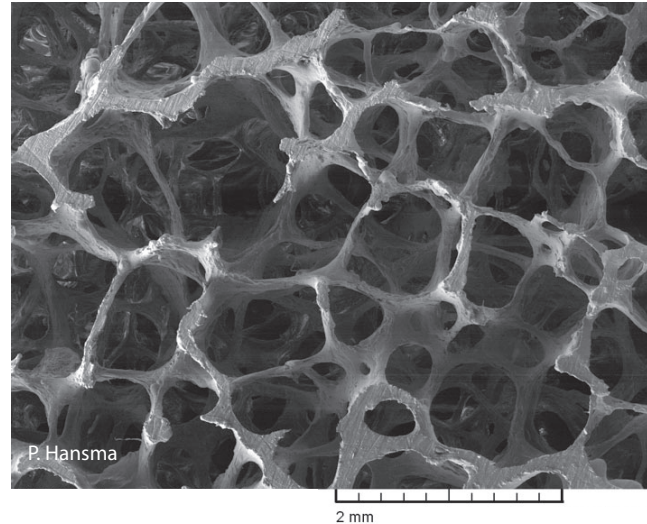
# spectral characterization of porous microstructures in bone

Golden, Murphy, Cherkaev, J. Biomechanics 2011

(a) young healthy trabecular bone



(b) old osteoporotic trabecular bone



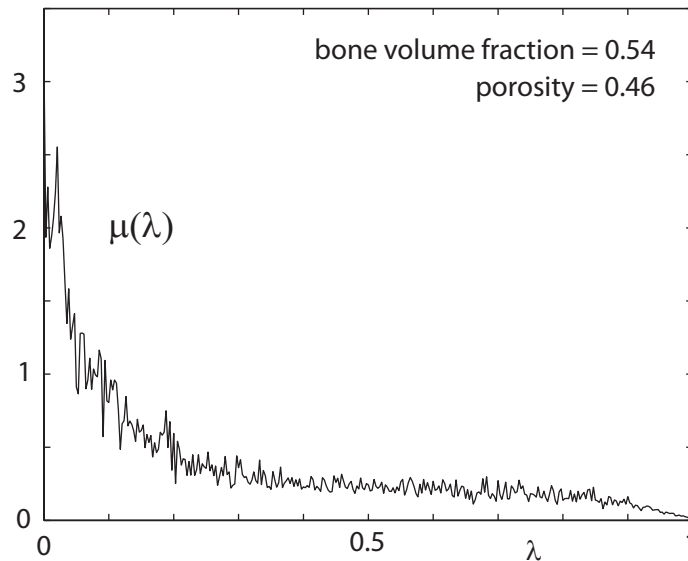
+

reconstruction of spectral  
measures from complex  
permittivity data

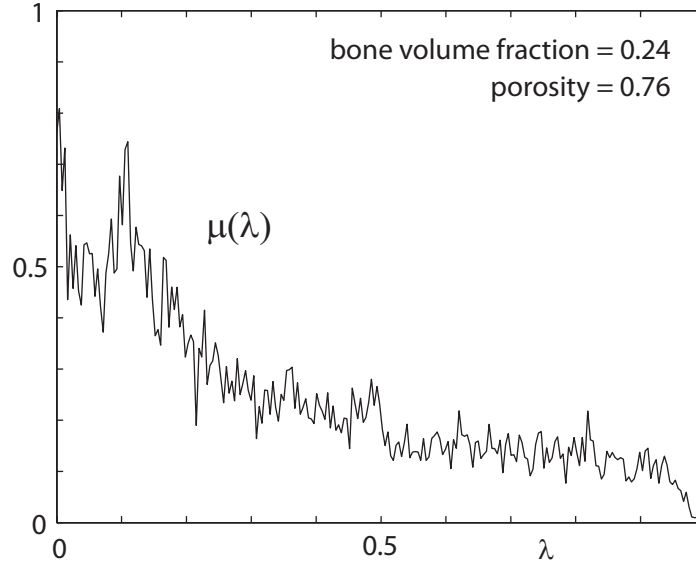
*using regularized  
inversion scheme*



(c) spectral measure - young



(d) spectral measure - old



***EM monitoring  
of osteoporosis***

***loss of bone  
connectivity***

***the math doesn't care if it's sea ice or bone!***