

abstract

GEOMETRY AND MATERIALS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

Perfectly dry foams coarsen by the diffusion of gas between bubbles according to laws proved by von Neumann in 2d and by MacPherson and Srolovitz in 3d. The remarkable feature in 2d is that a bubble grows or shrinks at a rate that does not depend on its size or shape or neighbors, but only on its number of sides. Real foams, however, are not perfectly dry -- rather the liquid films and particularly their junctions occupy a nonzero volume fraction of space. In this talk I will review experiments on the liquid fraction dependence of the coarsening rate in 3d, where drainage effects are inevitably also present. And I will describe new experiments on quasi-2d foams in which we control the wetness and find that deviations from the von Neumann law are larger for smaller bubbles.