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Competing dynamics of vitrification and crystal coarsening

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Materials undergoing glass transitions are often materials that can also crystalize. The qualities of the solid that forms depend upon the system's dynamics and experimentalist's protocols. This lecture describes some of the associated phenomena, including competition between crystal nucleation and structural relaxation, transient domains and dynamic heterogeneity, grain boundaries and polycrystallinity. A stochastic model from which all of these phenomena emerge will be presented.