STEPHAN TILLMANN, Université du Québec à Montréal
Angle structures and geometric splittings

The study of angle structures on an ideally triangulated 3-manifold (M, T) goes back to Casson, who noticed that the existence of such a "linear hyperbolic" structure has strong topological consequences: M is irreducible, atoroidal and its ends are tori or Klein bottles.

In this talk I describe topological consequences in the case where a degenerate angle structure (some angles may be 0) is dual to a normal surface. The surface turns out to be essential, and the associated splitting of a uniquely associated Dehn–Thurston surgery of M is geometric: the pieces are Seifert fibered spaces or "linear hyperbolic" cone-manifolds. I will also explain how this illustrates the Culler–Shalen machine in special cases.