1077-57-134 **Morwen Thistlethwaite** and **Anastasiia Tsvietkova*** (tsvietkova@math.utk.edu), tsvietkova@math.utk.edu. *An alternative approach to hyperbolic structures on link complements.*

Thurston demonstrated that every link in S^3 is a torus link, a satellite link or a hyperbolic link and these three categories are mutually exclusive. It also follows from work of Menasco that an alternating link represented by a prime diagram is either hyperbolic or a $(2, n)$–torus link.

A new method for computing the hyperbolic structure of the complement of a hyperbolic link, based on ideal polygons bounding the regions of a diagram of the link rather than decomposition of the complement into ideal tetrahedra, was suggested by M. Thistlethwaite. Although the method is applicable to all hyperbolic links, it works particularly well for alternating (non-torus) links. The presentation will introduce the basics of the method. Some applications will be discussed, including a surprising rigidity property of certain tangles, a new numerical invariant for tangles, and formulas for the volume of 2–bridged links. (Received August 05, 2011)