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*Dehn coloring and the dimer model for knots.* Preliminary report.

Fox coloring provides a combinatorial framework for studying dihedral representations of the knot group. Dehn coloring captures the same data from the perspective of the Dehn rather than Wirtinger presentation. A recent paper of Carter-Silver-Williams discusses the relationship between the two coloring schemes focusing on how one transitions between them. In this talk, we review Dehn coloring and relate it to the dimer model for knots showing that Dehn coloring data is encoded by a certain weighting of the balanced overlaid Tait graph. Using Kasteleyn theory, one can compute coloring data using partition functions. These constructions are closely related to Kauffman's work on a state sum model for the Alexander polynomial. (Received August 11, 2015)