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Oliver T Dasbach* (kasten@math.lsu.edu), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803-4918, and Adam M Lowrance (alowrance@math.uiowa.edu), Department of Mathematics, 14 MacLean Hall, Iowa City, IA 52242-1419. Turaev genus, knot signature, and the knot homology concordance invariants: Part 1.

The Turaev surface of a knot diagram is a certain Heegaard surface on which the knot has an alternating projection. The minimum genus of any Turaev surface of a diagram is the Turaev genus of the knot. In this talk, I will give the construction of the Turaev surface and explain a connection to the Khovanov and knot Floer homology of the knot. (Received March 24, 2010)