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Oliver Dasbach and **Adam Lowrance*** (alowrance@math.uiowa.edu). *Turaev genus, knot signature, and the knot homology concordance invariants.*

The Turaev surface of a link diagram is a certain cobordism between the all A and all B resolutions capped off with disks. The Turaev genus of a link is the minimum genus of any Turaev surface for the link. We use a relationship between knot signature and the spanning tree complexes for Khovanov and knot Floer homology to give new lower bounds for the Turaev genus of a knot. (Received April 11, 2010)