Immersed turnovers in hyperbolic 3-orbifolds

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Abstract. A hyperbolic turnover is a 2-orbifold isometric to the double of a hyperbolic triangle whose interior angles are integer submultiples of $\pi$. In this talk, I will show that if a hyperbolic 3-orbifold $Q$ contains an immersed (but non-embedded) hyperbolic turnover $T$, then $Q$ contains a hyperbolic 3-suborbifold $Q'$ which contains $T$, with $\text{Vol}(Q') < 6/5 \times \text{Area}(T)$. Furthermore, I will show that for a given turnover type, there are only finitely many possibilities for such a “turnover core” $Q'$. 