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HYPERBOLIC 5-MANIFOLDS THAT FIBER OVER THE CIRCLE

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We provide some examples of hyperbolic 5-manifolds fibering over the circle, showing that this phenomenon is not restricted to dimension 3. One consequence of this result is the existence of a hyperbolic group with a finite-type subgroup that is not hyperbolic. The main tool to build the fibration is Bestvina-Brady Morse theory applied to a hyperbolic n -manifold that decomposes into right-angled polytopes, enriched with a combinatorial game recently introduced by Jankiewicz, Norin and Wise. This result is a joint work with Martelli and Migliorini.