Blowing-up solutions for Yamabe-type problems

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Abstract: The Yamabe equation is one of the most natural and well-studied second-order semilinear elliptic equations arising in geometric variational problems. The issue of the effect on a priori estimates of perturbing the geometric Yamabe equation has been recently studied and it is related to the existence of solutions blowing-up at one or more points in the manifold. In this lecture, I will review these results and present more recent works on Yamabe-type problems, where solutions blowing-up along higher dimensional submanifolds have been found.