Blow-up analysis of conformal metrics with prescribed curvatures on the disk

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We will establish necessary conditions on the blow-up points of conformal metrics of the disk with prescribed Gaussian and geodesic curvatures, where a non local restriction will appear. Conversely, given a point satisfying these conditions, we will construct an explicit family of approximating solutions that explode at such a point. These results are contained in several works in collaboration with A. Jevnikar, R. López-Soriano and D. Ruiz, and with L. Battaglia and A. Pistoia.