

# Bergman kernels on punctured Riemann surfaces

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## Abstract

We consider a punctured Riemann surface endowed with a Hermitian metric which equals the Poincaré metric near the punctures and a holomorphic line bundle which polarizes the metric. We study the optimal uniform estimate of the supremum norm of a holomorphic  $L^2$  section of the power of the line bundle when the power tends to infinite. We show that it can be localized around the singularities and its local model is the punctured unit disc endowed with the standard Poincaré metric.