

# Polynomial approximation of piecewise analytic functions on quasi-smooth curves

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## Abstract

For a function  $f$  that is piecewise analytic on a quasi-smooth arc  $L$  and any  $0 < \sigma < 1$  we construct a sequence of polynomials that converge at a rate  $e^{-n^\sigma}$  at each point of analyticity of  $f$  and are close to the best polynomial approximants on the whole  $L$ . Moreover, we give examples when such polynomials can be constructed for  $\sigma = 1$ .