Polynomials orthogonal with respect to densely oscillating and exponentially decaying weight functions

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Software (in Matlab) is developed for computing variable-precision recurrence coefficients for orthogonal polynomials with respect to the weight functions $1 + \sin(1/t)$, $1 + \cos(1/t)$, $e^{-1/t}$ on $[0, 1]$, as well as $e^{-1/t-t}$ on $[0, \infty]$ and e^{-1/t^2-t^2} on $[-\infty, \infty]$. Numerical examples are given involving Gauss quadrature relative to these weight functions.