

We consider the problem of estimating the line spectrum of a signal from finitely many time domain samples. We present a gridless algorithm for solving the total variation minimization approach associated with this problem. Unlike the related previous results, our method does not require the sampling instants to lie on an uniform grid. The resulting algorithm is a semidefinite program, structurally similar to some of the existing methods. One key observation made in our analysis also allows us to develop a gridless version of the SPICE algorithm. The simulation results demonstrate the superiority of these in performance compared to other related methods.