



LINE SPECTRAL PROPERTIES OF QUADRATIC MODELS (TueAmPO2)

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★ **Abstract :** Line Spectrum Pair (LSP) decomposition is a technique developed for robust representation of the coefficients of a Linear Predictive (LP) model. It has favourable properties with respect to root loci and quantisation noise. In this article, we will explore the properties of LSP polynomials when they are used to represent quadratic models of form $A^2(z)$ and $A(z)z^{-m}A(z^{-1})$. The quadratic models show intriguing properties in LSP decomposition, which can be used to develop a Levinson-type algorithm.