

The Use of Factorization and Multimode Parametric Spectra in Estimating Frequency and Spectral Parameters of Signal

Publisher: IEEE

Cite This

PDF

Valerii Semenets ; Vladimir Kartashov ; Oleg Sergiyenko ; Vyacheslav Tikhonov ; Paolo Mercorelli ; Sergiy Sheiko ; Nataliya Chm... [All Authors](#)

20
Full
Text Views



Abstract

Document Sections

- I. Introduction
- II. Multiplicative Linear Prediction Models
- III. Methods For Decomposing Multimode Spectra Into Components
- IV. Decomposition of Parametric Spectra

Abstract:

A multiplicative autoregressive model is constructed based on the linear prediction model. The expressions describing such a model are derived. A formula for the parametric spectral estimation of a random signal multiplicative model is given. Relations are obtained for the decomposition of the multimode power spectral density into simple spectral components. Examples of the decomposition of multimode spectra of random signals into simpler components are considered. Keywords - power spectral density, multiplicative autoregressive model, parametric spectral analysis, characteristic equation.

Published in: 2020 IEEE 29th International Symposium on Industrial Electronics (ISIE)

Date of Conference: 17-19 June 2020

INSPEC Accession Number: 19970861

Date Added to IEEE Xplore: 30 July 2020

DOI: 10.1109/ISIE45063.2020.9152238