

# Channel estimation for multicarrier modulation systems using a time-frequency polynomial model

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## ABSTRACT

Channel estimation is a crucial aspect in the design of multicarrier modulation systems. We propose a channel estimation scheme based on polynomial approximation of the channel responses in both the time and frequency domains. The proposed estimator is more robust to the variations of channel statistics. Our simulation shows that it has more than a 5-dB improvement over the existing methods under practical channel conditions

## INDEX TERMS

Channel estimation, Time frequency analysis, Polynomials, Frequency domain analysis, Statistics, Bandwidth, Intersymbol interference, Transmitters, Design optimization, Estimation error.

## IMPORTANT CONTRIBUTIONS

This the first paper to use polynomial fitting for channel estimation.

## IMPOTANT CITATIONS