

ESTIMATION OF BANDLIMITED STOCHASTIC OPERATORS USING SIC-POVMs

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We describe a novel estimator for bandlimited stochastic operators. The operators considered are frequently used to model randomly varying parts of radar targets and communications channels. The presented estimator is based on insights on stochastic modulation spaces, in operator sampling theory, and on finite dimensional Gabor frames. In case of wide sense stationary with uniform scattering (WSSUS) targets, we exhibit a connection to symmetrically information complete positive operator valued measures (SIC-POVMs) as considered in quantum information theory.

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