

# Stochastic signal processing in phase space

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We consider signal processing tasks in which the signal is transformed to a high dimensional space, called phase space, processed in this space, and synthesized to an output signal. For example, an audio signal can be transformed to the time-frequency plane, manipulated there, and synthesized to an output audio signal. We present in this talk discretion schemes of phase space based on (quasi) random samples, rather than regular grids. We will see that this stochastic approach improves grid based methods in some important situations.