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# EXAMPLES OF THE ADAPTIVE OPTIMAL-KERNEL (AOK) TIME-FREQUENCY REPRESENTATION

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## Non-Adaptive TFRs

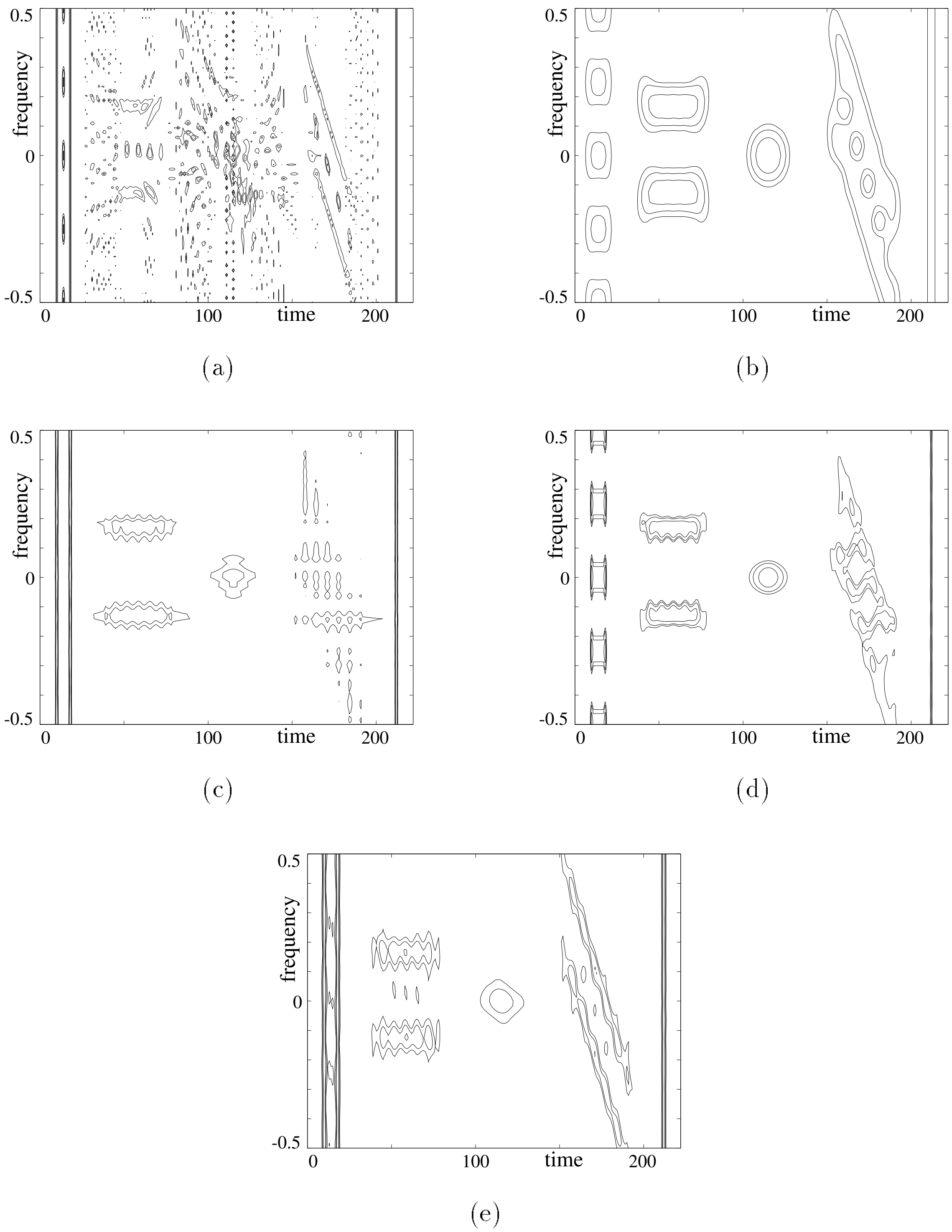
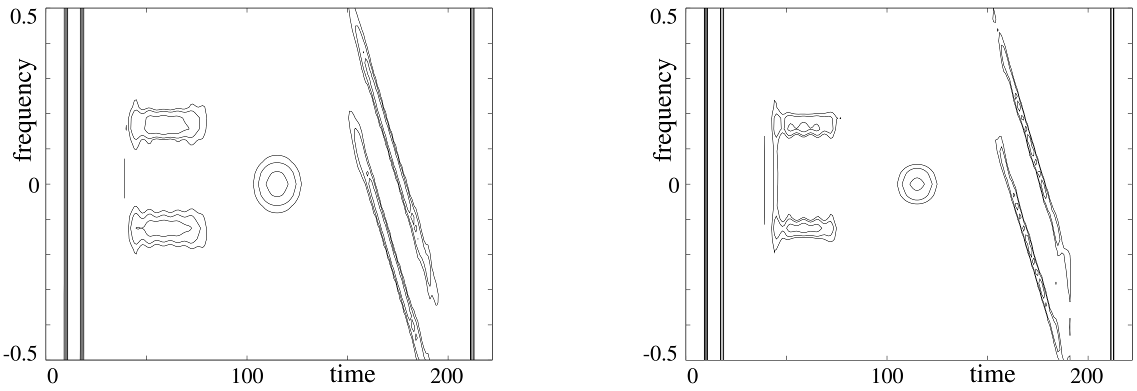



Figure 1: *Comparison of several state-of-the-art time-frequency representations (TFRs) of a synthetic test signal. (a) Wigner distribution* [1]*. (b) Spectrogram. (c) Choi-Williams distribution* [2]*. (d) Cone-kernel representation* [3]*. (e) Radially Gaussian optimal-kernel TFR* [4]*. This last TFR is signal-dependent, but designs just one kernel for the entire signal.*

# Adaptive TFRs




(a) (b)

Figure 2: *Adaptive TFRs of the synthetic test signal* [5]. *These new TFRs adapt the form of the kernel over time to maximize performance. (a) Adaptive optimal-kernel (AOK) TFR. (b) AOK TFR with additional time-support (cone) constraint.*