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# On some data-driven time-frequency methods

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Time-frequency methods can be broadly classified in two types, depending on whether the signal itself or some transform of it (such as energy or power) is displayed in the time-frequency plane. A further classification pertains to the construction of the transform which may either correspond to some given scheme, independent or the analyzed signal, or to some adaptive, data-driven, algorithm. The presentation will briefly recall basics of those different approaches, with emphasis on recent variations of the data-driven type, namely generalized reassignement and empirical mode decompositions. Examples will be provided for illustrating potentialities and limitations of the different methods, as well the effectiveness of combining them in the perspective of analyzing and/or processing nonstationary signals.