

**ACOUSTICS2008/3347**  
**On sinusoidal modeling of nonstationary signals**

Axel Roebel  
IRCAM, 1, pl. Igor-Stravinsky, 75004 Paris, France

In this presentation we are going to give an overview over a number of techniques that have been developed in our group to improve the modeling of musical (non-stationary) signals using sinusoidal models. One of the basic problems with sinusoidal models is the fact that the underlying theory is derived assuming stationary sinusoids, while in the real world all sinusoidal components are non stationary. The two topics that will be covered main are, first a technique that allows to distinguish between non stationary sinusoidal components, noise and transients, and second a new technique for parameter estimation of non stationary sinusoids using frequency domain demodulation.