Pitch, defined as perceived fundamental frequency, is one of the main features of speech. Therefore, pitch determination is necessary in almost any application related to speech. Many algorithms for pitch estimation have been proposed in the past; however, none of them have produced completely satisfactory results. In this talk, we present SHAPE, a new pitch estimation algorithm inspired in the way humans perceive inharmonic sounds (i.e., sounds in which the frequency components are not exact harmonics of the fundamental). SHAPE is tested using a common database specifically built to test pitch estimation algorithms. For local estimates of pitch, and based on previously reported results, SHAPE is shown to outperform other algorithms over this database.