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PDF文档

关于听神经放电时间构型听觉模型的研究

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提出了一个基于听神经纤维放电时间模式的高度简化的听觉模型。该模型由两部分组成。第一部分是一个耳蜗模型,其中HRB和 LRB 粗略的模拟不同自发放电率听神经纤维的某些放电特性。第二部分是一个转换器,它产生一种频域表示:选择性同步滤波器数(Numbers of Se-lectively Synchronized Filters,NSSF)。这种 NSSF 频谱表示具有清晰,能强调高频域的频率分量及能强调频谱的变化与对比等几个特点。

A RESEARCH ON AUDITORY MODELING OF TEMPORAL PATTERN OF AUDITORY NERVE DISCHARGE

This paper presents a highly simplified auditory model based on temporal pattern of auditory nerve discharge. The model consists of two stages. The first stage is a cochlear model incorporating HRB and LRB, which roughly simulate the mechanics relative to producing different spontaneous discharge activities of auditory nerve fibers. The second stage is a transformer which yield a frequency-domain spectral representation: Numbers of Selectively Synchronized Filters(NSSF:Numbers of Selectively Synchronized Filters). The resulting NSSF representation has several particular properties: it is a kind of clear spectral representation, it emphasizes information in high frequency region, it emphasizes spectral contrast.

关键词

听觉模型(Auditory model); 听神经纤维自发放电率(Spontaneous discharge rate of auditory nerve fibers); 听神经放电时间构型(Temporal pattern of auditory nerve discharge); 耳蜗滤波器(Cochlear filter)