

## **ACOUSTICS2008/472**

### **What can binocular rivalry tell us about auditory streaming?**

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Although sensory systems share the common goal of building accurate representations of the environment, differences in the physical nature of stimuli from different modalities seem to argue against similar processing strategies. Nevertheless, our experiments have revealed surprisingly deep parallels between the dynamics of perceptual organisation in auditory streaming and binocular rivalry. These parallels provide evidence for an interpretation of auditory streaming in terms of rivalry between competing temporal associations, which helps to explain the distribution of perceptual switching with respect to stimulus features, strong differences between first and steady-state phases in ongoing switching, the non-monotonic dependence of switching rate on stimulus 'strength', the range of relationships between phase duration and stimulus features, and the existence and distribution of 'transition' phases during which subjects simultaneously experience what are usually thought to be mutually exclusive perceptual states.