

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Tisdagen den 27 maj kl. 11.00–12.00 presenterar Victor Wase sitt arbete “On the Mathematics of Spatial Hearing” (15 högskolepoäng, grundnivå).

Handledare: Yishao Zhou

Plats: Sal 32, hus 5, Kräftriket

Sammanfattning: This paper studies the ability of spatial hearing and the synthesis of 3D audio. Some of the most well researched subjects concerning 3D audio is the shape of the position dependent frequency response of the ears (the so called Head Related Transfer Function) and the difference of a sound’s arrival time between the ears (the so called Inter aural Time Difference). Using anthropological data and basic geometry a new ITD model is constructed. It is then compared somewhat favourably to the classical model of Woodworth. The effect of the shape of the outer ear (pinnae) on the elevation of HRTF is investigated as well. The results were inconclusive, but encouraging. Finally a couple of different interpolations schemes were tried and investigated on the measurements from the ‘94 KEMAR database

Alla intresserade är välkomna!