



**Programme: Sound and Music Computing**

**Semester: 7th**

**Title: An efficient 3-D sound experience for mobile application**

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**Semester Theme: Foundations of Sound and Music Computing**

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**Abstract:**

The computational power of mobile devices has highly increased in the last few years and nowadays almost every device is equipped with a Global Positioning System (GPS) and compass sensor. These facilities opens up possibilities to enhance the user experience in daily life. In this paper an application for mobile devices that uses an efficient head related transfer function (HRTF) model to create 3-D soundscapes is presented. In a small experiment the developed 3-D audio engine is compared with a cosine panner model [1] in terms of quality and efficiency of the navigational cues. Although the experiment did not reveal significant differences between the two models a critical observation of this study supports that a more sophisticated 3-D audio engine can increase the user experience in audio navigation.