

# Haptics visualisation of scientific data for visually impaired users

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## ABSTRACT

Visualisations of numerical data often used in science, engineering and mathematics are not easily accessible to visually impaired students. This paper describes the development and evaluation of a multimodal system to present graphical data in real-time to those students. Haptic interfaces form the primary interaction, along with auditory feedback allowing graphs to be perceived through touch, sounds and speech. The results show that the system can be used to quickly and accurately obtain information from a graph. It has been demonstrated that haptic devices can be successfully used to allow access to line graph data.

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**Full papers will be published in the Conference Proceedings and will be available to delegates at the conference on Sept. 10.**

**Full papers will be released on-line in the ICDVRAT archive on March 15.**