

## **The bell chime – an acoustical, mathematical and technological challenge**

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Storing the unique sound and the parameters of the church bells, that are valuable for our culture, is high scientific challenge. Measuring the sound and the vibration in the conditions of the real objects – the church towers and the museum rooms is complicated task. A singular equipment and complex processing of the raw signal is necessary. The present paper represents an application, using methods of digital processing of signals for analysis of bell sounds. Detailed information about the examined bells is maintained in an audio and video archive of unique Bulgarian bells. The application is realized with MatLab and provides possibility for searching bells from the archive according to their sound.

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