

Digital sound waves

- ▶ **Problem:** Computers deal with discrete data (zeros and ones)
 - We need to convert (sample) the continuous signal into digital presentation
 - **Sampling** converts a time-varying voltage signal into a discrete-time signal, a sequence of real numbers.
 - **Quantization** replaces each real number with an approximation from a finite set of discrete values.

Analog signal to digital signal: Sampling

- ▶ Sampling period = $1/\text{sampling rate}$ (seconds)

