Using Sound with the TuneR Package

Begin by visiting the website www.r-project.org and download and install the appropriate version of R according to your platform. See the handout **How to get started with sound in R** to do this.
Once you are ready to use the **tuneR** package. Here is a very simple example of what you can do with sound. In what follows the > is the R command prompt.

```
> library(tuneR)                              # load the tuneR library.
> help(tuneR)                                 # gives a cryptic description of the R commands in the package
> help(Wave)                                  # for information about a specific function in the package
>                                             # let's make a sine wave and play it ..
> sr = 8000                                   # the sampling rate
> t = seq(0, 2, 1/sr)                         # times in secs if sample for 2 seconds at 8KHz
> y = (2^15-1)*sin(2*pi*440*t)                # sine wave a 440 Hz scaled to fill out 16 bit range
> w = Wave(y, samp.rate = sr, bit = 16)       # make the Wave representation
> play(w,"play")                              # play it using the player named ``play''
>                                             # the 2nd field can be left blank and Windows is supposed to
>                                             # figure out what to do
>                                             # let's read in some audio data from a .wav file
> w = readWave("winter_excerpt_zurich.wav")# need to give complete path if not in local directory
> str(w)                                      # these are the components of the Wave structure
> y = w@left                                  # make a data vector out of left channel
> i = 1:length(y)                             # 1,2,3 ..
> y = y[i%%2 == 0]                            # take every other element of y
> u = Wave(y, samp.rate = 44100, bit=16)      # make wave struct
> play(u,"play")                              # play it using the player named ``play''
```