SUPPLEMENTARY MATERIAL INFORMATION

We provide scripts of the R computational environment to perform calculations, the results of which are contained in the manuscript, as well as records of execution of these scripts in HTML format generated using the R markdown tools.

Required R environment packages:

- `stats`,
- `psych`,
- `ggplot2`,
- `MASS`,
- `doParallel`
- `caret`,
- `randomForest`,
- `nnet`,
- `knitr`,
- `hexbin`,
- `rgl`,
- `RColorBrewer`.

Description of the most important files:

- `ArtAlgModelsCompare.R` – performs calculation of truth table and other performance indicators of models for various training methods (indicators are computed according to cross validation scheme),
- `FinalClassifPerf.R` - computes final classifier response truth table and other performance indicators for test data,
- `RespAlgVerif.R` – generates Bland-Altman and scatter plots for respiratory rate detection algorithm for test data, computes RMSE for detection algorithm,
- `runRFE.R` – performs recursive features elimination (RFE) procedure,
- `exploreRFEresults.R` – explore results of RFE,
- `ArtAlgRandomize.R` – analogue of `ArtAlgModelsCompare.R` but for randomized features, computes performance indicators on randomized data for over-fit assessment,
- `trainDataHist.R` – plots distributions (histogram) of training and test respiratory rates.
An exemplary results of the execution of above described scripts are contained in following files:

- `ArtAlgModelsCompare.html`,
- `FinalClassifPerf.html`,
- `RespAlgVerif.html`,
- `exploreRFEresults.html`,
- `ArtAlgRandomize.html`,
- `trainDataHist.html`.

The remaining files contain functions used by the scripts that perform calculations and data necessary to perform these calculations.