# Respiratory Rate Determination by Non-Invasive Means

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# 1 Introduction

### 1.1 Background

(Penzel et al., 2000).

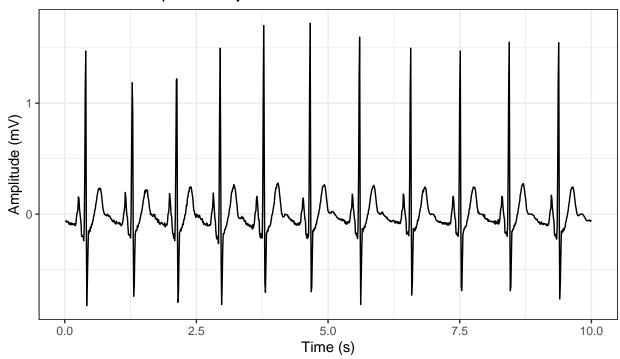
# 2 The data

#### 2.1 Data source

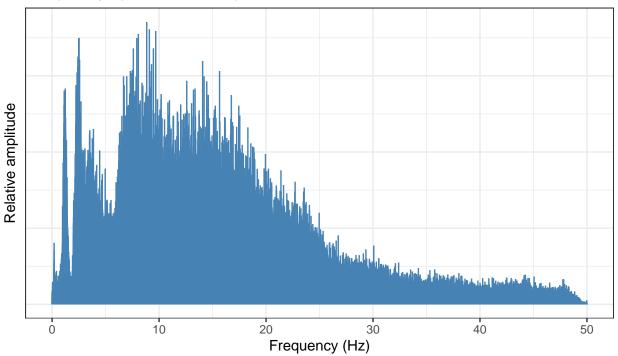
(Goldberger et al., 2000).

# 2.2 Sample plot

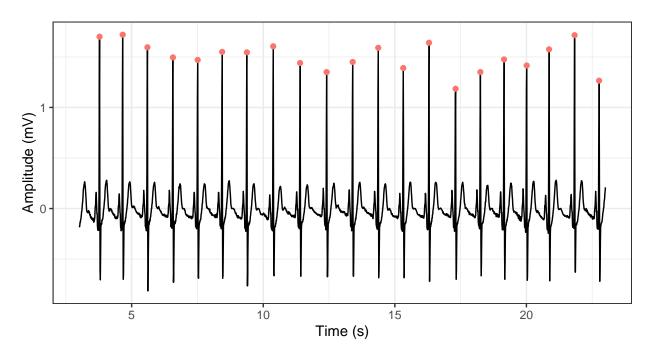
# 10-second sample of subject a01



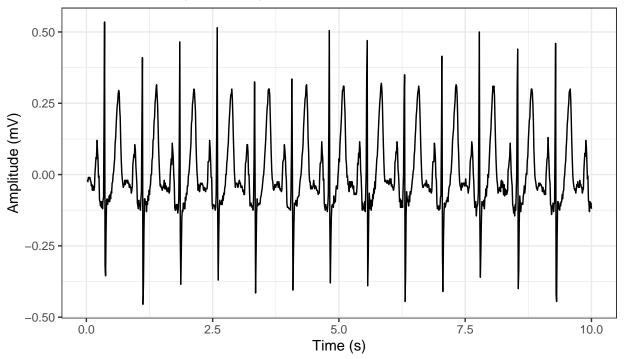
# Frequency spectrum of subject a01



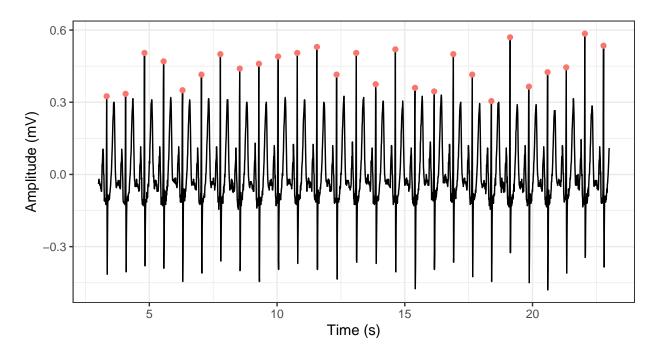
### Estimated R-peaks



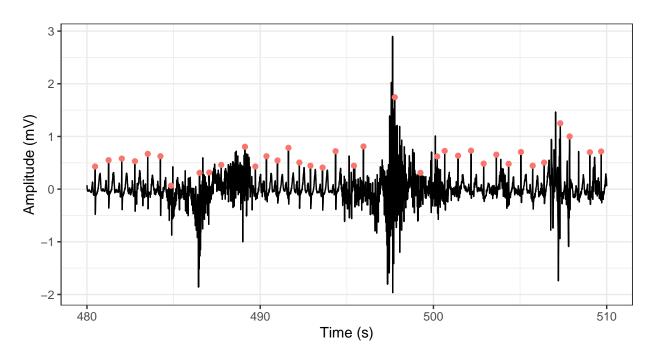
# 10-second sample of subject a02



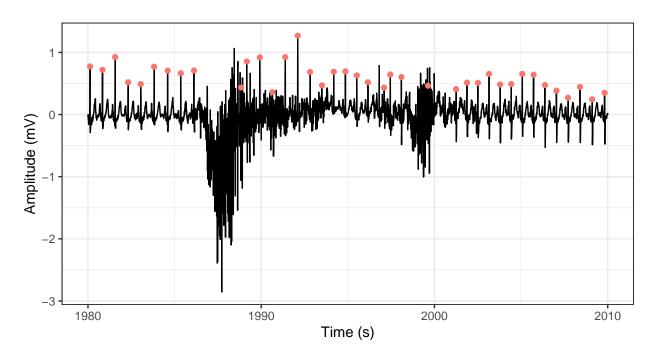
### Estimated R-peaks

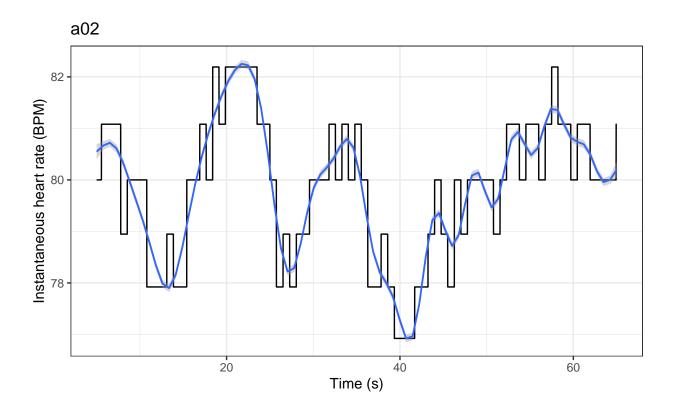


### Estimated R-peaks



### Estimated R-peaks





### References

- Goldberger, A. L., Amaral, L. A., Glass, L., Hausdorff, J. M., Ivanov, P. C., Mark, R. G., Mietus, J. E., Moody, G. B., Peng, C.-K., & Stanley, H. E. (2000). Physiobank, physiotoolkit, and physionet. *Circulation*, 101(23), e215–e220.
- Penzel, T., Moody, G. B., Mark, R. G., Goldberger, A. L., & Peter, J. H. (2000). The apnea-ecg database. Computers in Cardiology 2000, 255–258.