

Balance Impairment and Fall-Risk Estimation Dataset:

IMPORTANT: If you use this dataset, please cite the following paper:

Shahzad, A., Ko, S., Lee, S., Lee, J. A., & Kim, K. (2017). Quantitative Assessment of Balance Impairment for Fall-risk Estimation using Wearable Triaxial Accelerometer. *IEEE Sensors Journal*.

Experiment Protocol and Settings:

Subjects: 23 Elderly people

Activities Performed:

- 1) Berg Balance Scale (BBS) - without sensor
- 2) Directed Routine - with waist mounted triaxial accelerometer sensor
 - a) Timed up and go test (TUGT)
 - b) Five times sit to stand test (FTSS)
 - c) Alternate step test (AST)

Each subject performed DR tasks twice (2 trials of each test that means 6 data files for each subject).

Sensor: Accel (+/- 1.5g) - Shimmer 2R.

Position: Waist(Lower back)

Sampling rate: 41 Hz

For subjects details please see the excel file "[Subjects_Details.xlsx](#)"

To visualize / plot the data files, please check the MATLAB code "[data_visualize.m](#)"

To download the dataset, please click below and provide the following information:

- 1) Name of Researcher:
- 2) Name of Principal Investigator (PI):
- 3) Affiliation:
- 4) Research Summary (1 or 2 lines):

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