# Fall Detection

**Root-of-Sum-Squares (RSS)** – The total acceleration from the X, Y, and Z axis are combined.





**Lower Fall Peak (LFP)** – Check the acceleration when the value plummets down towards 0G in a free fall until finally reaching impact.

**Lower Fall Threshold (LFT)** – Using training data of LFP to establish a lower threshold value.

**Lower Lying Peak (LLP)** – The body posture in the lying position.

**Upper Fall Peak (UFP)** – The force from the impact with the ground. This force leads to the vertical acceleration value increasing quickly towards the opposite direction of the acceleration due to gravity.

**Upper Fall Threshold (UFT)** – Using training data of UFP to establish an upper threshold value.

**Upper Lying Peak (ULP)** - The body posture in the lying position.

**Falling-Edge Time (tfe)** – the time from when the RSS signal last goes below the LFT until it reaches the UFT.

**Rising-Edge Time (tre)** – the time for when LFT is last exceeded until UFT is exceeded. This is always a subset and smaller than tfe.

**Velocity** – measure the critical phase of a fall –



**Fall Index**



**Z2**

