<u>Summary</u>

- Consider modeling the distribution of the age that a person dies at. Age of death, measured perfectly with all the decimals and no rounding, is a continuous random variable
- Here we have discussed two important properties by which we may characterize random variables, regardless of the probability distribution- location and the dispersion
- Location: the central tendency of the variable, which describes a value around which the variable tends to cluster. Different measures of location of a continuous random variable are:
 - $\circ \quad \text{Mode}$
 - \circ Median
 - o Mean
- Dispersion: the typical range of values that might be expected to be observed in experiments. This gives some idea of the spread in values that might result from our experiment(s) Different measures of dispersion of a continuous random variable are:
 - The inter-quartile range and the semi-inter-quartile range
 - The mean absolute deviation
 - The variance and the standard deviation
- For a variety of reasons, the variance and standard deviation are the best measures of dispersion of a random variable.