

Estimation

Lecture 8

Introduction



degrees of freedom

$$s^2 = \frac{\sum(X - M)^2}{N - 1}$$

Bias

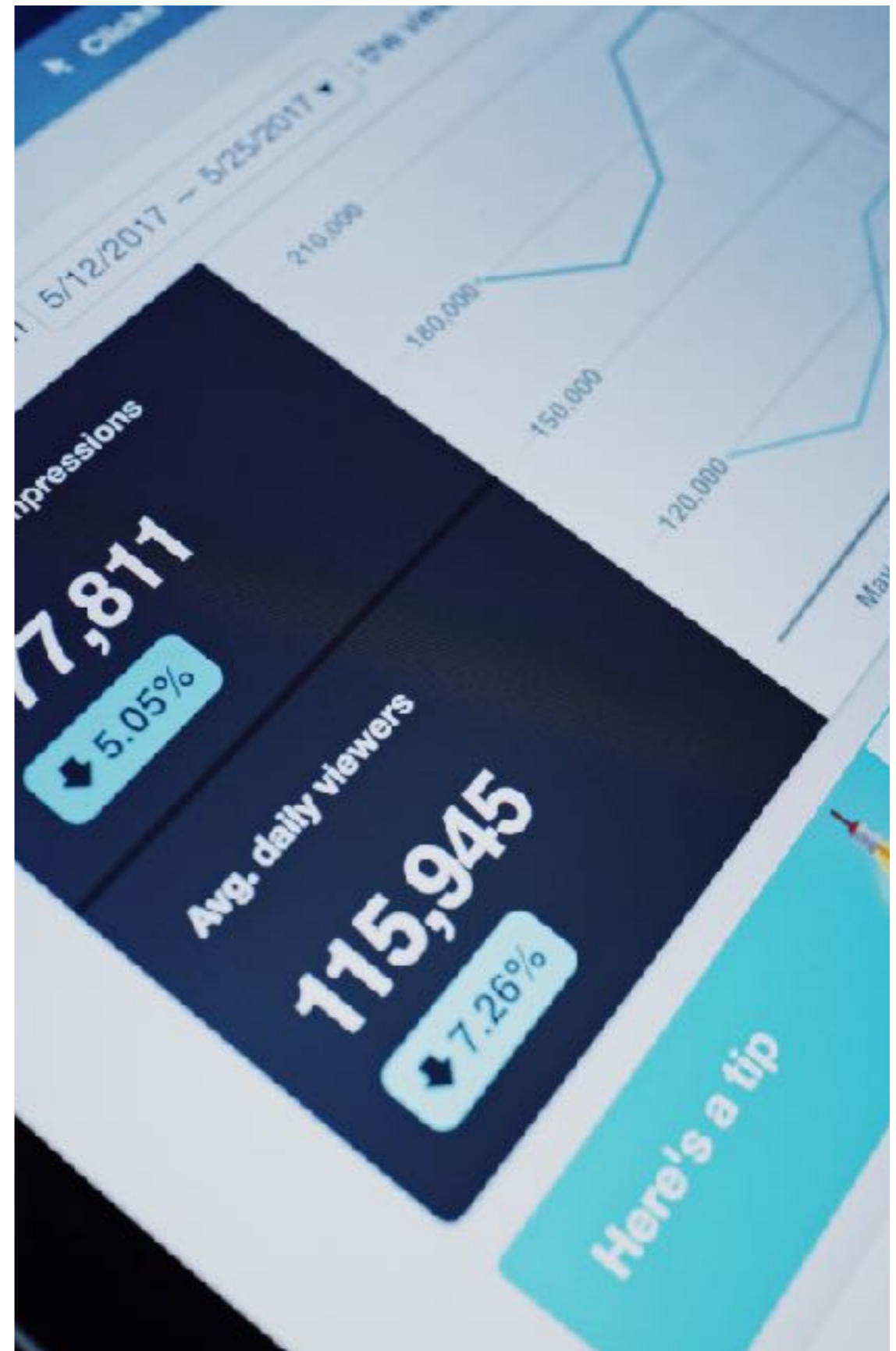
$$\sigma^2 = \frac{\sum(X - \mu)^2}{N}$$

$$s^2 = \frac{\sum(X - M)^2}{N - 1}$$

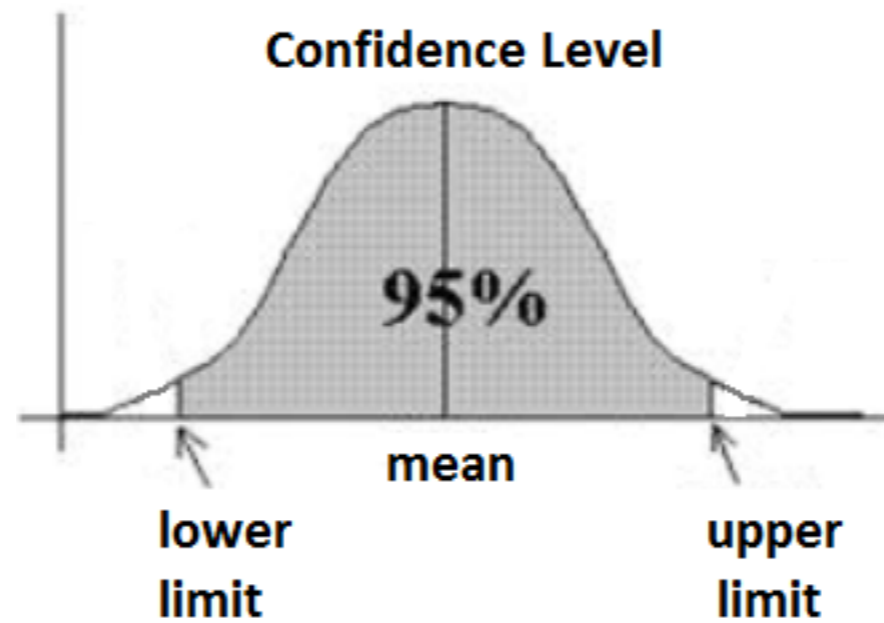
Sampling Variability

$$\sigma_M^2 = \frac{\sigma^2}{N}$$

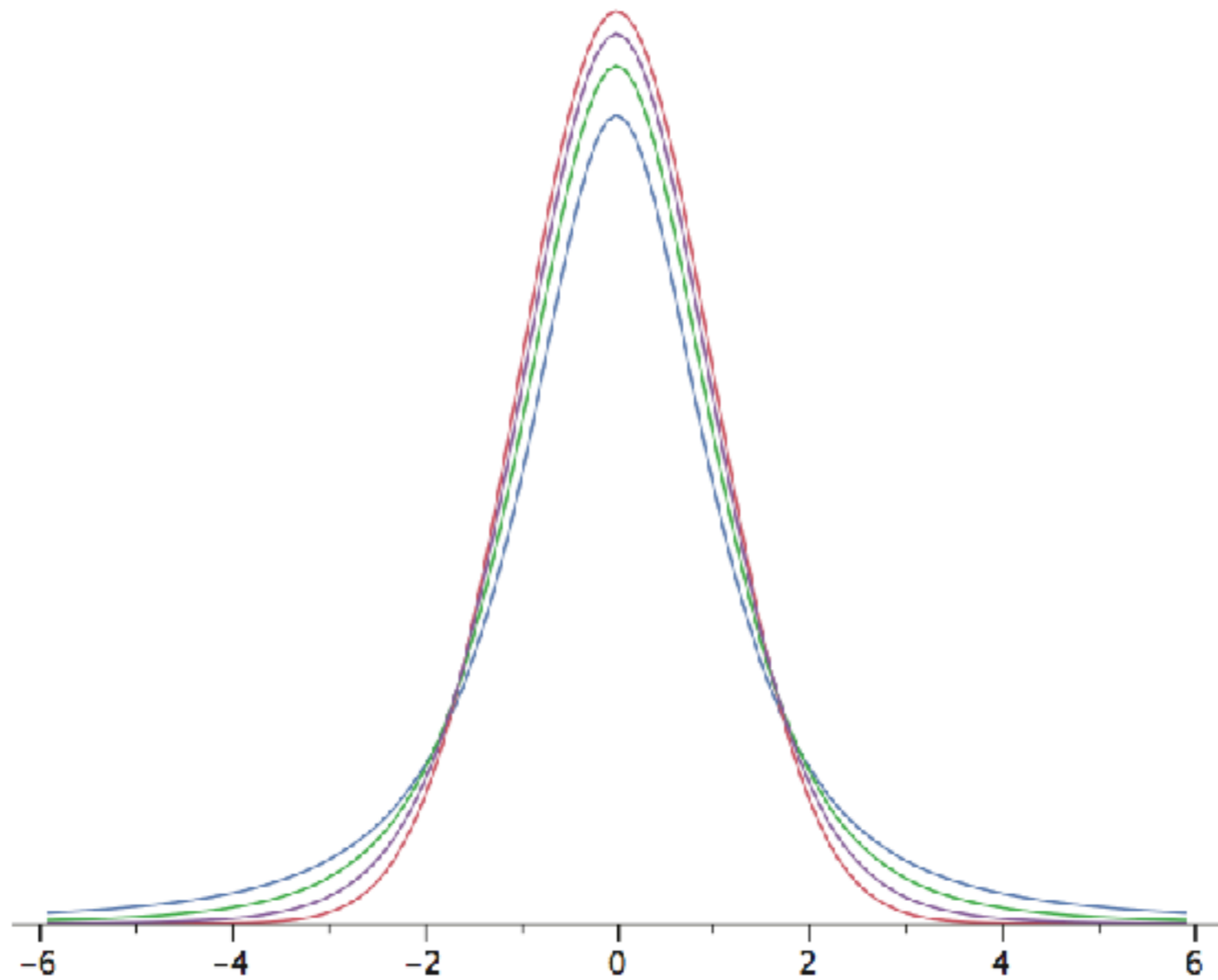
Confident intervals



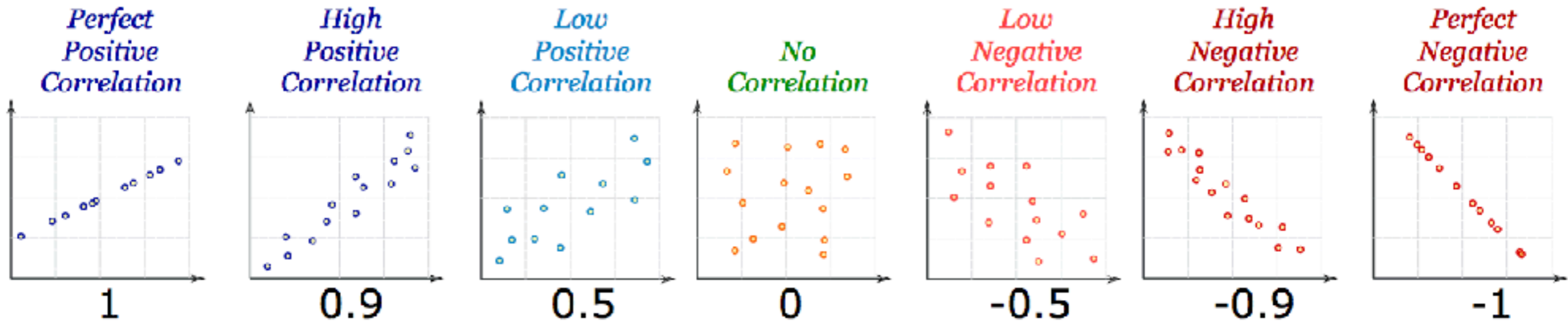
Introduction to confident intervals



t Distribution



Correlation



Proportion

$$\mu_p = \pi$$

$$\sigma_p = \sqrt{\frac{\pi(1 - \pi)}{N}}$$

Proportion

$$s_p = \sqrt{\frac{p(1-p)}{N}}$$

$$s_p = \sqrt{\frac{.52(1-.52)}{500}} = 0.0223$$

- Thanks for attention