

- Normalize image points

- **Centroid is at the origin.** We create the matrix T_{trans} for each camera like this:

$$\begin{bmatrix} 1 & 0 & -\mu_x \\ 0 & 1 & -\mu_y \\ 0 & 0 & 1 \end{bmatrix} \quad (1)$$

And we multiply each point of the cameras to they corresponding T matrix like this: Tx_i .

- **RMS distance from the origin is $\sqrt{2}$.** First compute the RMS of the available points:

$$\sqrt{\frac{1}{n} \sum_{i=1}^n ((x_i - \mu_x)^2 + (y_i - \mu_y)^2)} \quad (2)$$

Then create T_{scale} and multiply it to each point in the camera. T is:

$$T_s = \begin{bmatrix} \sqrt{2}/RMS & 0 & 0 \\ 0 & \sqrt{2}/RMS & 0 \\ 0 & 0 & 1 \end{bmatrix} \quad (3)$$

- **Multiply each point by $T_n = T_s T_t$ like this $[uv1]' = T_n x$. Do it for each camera.**

-