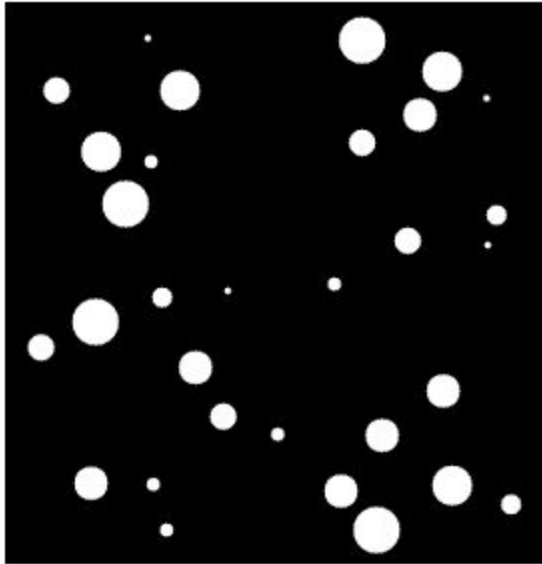


There are a bunch of white circles in each Figure.



First: We want to find the position and the radius of each circle.

Second: There are two pairs of Figures, and Figure B is a transformation (translation, rotation, and dilation) of Figure A.

Global similarity transformation matrix was found for each pair of images.

$$\begin{bmatrix} x_1 \\ y_1 \end{bmatrix} = s \begin{bmatrix} \cos(a) & -\sin(a) \\ \sin(a) & \cos(a) \end{bmatrix} \begin{bmatrix} x_0 \\ y_0 \end{bmatrix} + \begin{bmatrix} u \\ v \end{bmatrix}$$

Third: In pair 2,3,4 some circles of Figure A were lost in Figure B. Even though there is an overall correspondence between two Figures.

Here, I have used python to solve this problem.