

1. Suppose in the world coordinate system, the first camera center is $(2,2,2)$ and the associated three axes are $(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}, 0)$, $(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}, 0)$, and $(0,0,1)$. It is also known that in the second camera coordinate system, the world coordinate center is at $(-1,0,0)$ and its associated axes are $(0,1,0)$, $(-1,0,0)$, and $(0,0,1)$. Please describe how to represent the second camera coordinate system in the first camera coordinate system (center and axes)?
2. Please design an algorithm for detecting pairs of parallel lines in an edge image.