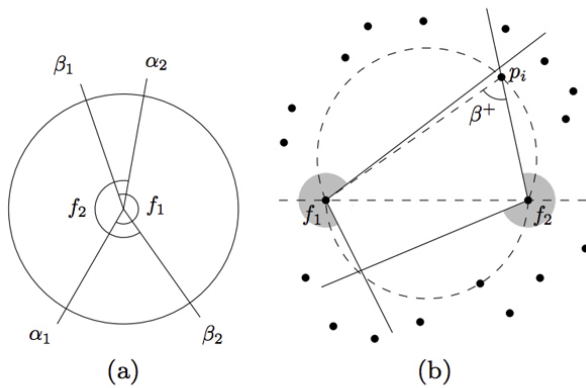


# Continuous surveillance of points by rotating floodlights

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Let  $P$  and  $F$  be sets of  $n \geq 2$  and  $m \geq 2$  points in the plane, respectively, so that  $P \cap F$  is in general position. We study the problem of finding the minimum angle in  $[2\pi/m, 2\pi/n]$  such that one can install at each point of  $F$  a stationary rotating floodlight with illumination angle  $\alpha$ , initially oriented in a suitable direction, in such a way that, at all times, every target point of  $P$  is illuminated by at least one light. All floodlights rotate at unit speed and clockwise. We give an upper bound for the 1-dimensional problem and present results for some instances of the general problem. Specifically, we solve the problem for the

case in which we have two floodlights and many points, and give an upper bound for the case in which there are many floodlights and only two target points.