

Circle placement in a rectangle

Solve the following optimization problem

Allocate N circles with known radiuses in a minimum surface rectangle without overlapping each other

$$\min LW$$

$$\forall_{i,j} \quad (x_i - x_j)^2 + (y_i - y_j)^2 \geq (r_i + r_j)^2$$

$$\forall_i \quad r_i \leq x_i \leq W - r_i$$

$$\forall_i \quad r_i \leq y_i \leq L - r_i$$

