

$$\left\{ \begin{array}{ll} \Delta^2 u = 0 & \text{in } \Omega \\ u(x, y) = 1 & \text{on } \partial\Omega \\ \frac{\partial u}{\partial n}(x, y) = g(x, y) & \text{on } \partial\Omega \end{array} \right.$$

$$u(x, y) = \sum_{i=1}^n c_i \log(r) + \sum_{i=1}^n d_i r^2 \log r$$

$$\frac{\partial u}{\partial n} = \sum c_i \frac{1}{r^2} (x n_x + y n_y) + \sum d_i (1 + 2 \log r) (x n_x + y n_y)$$

$$\left[ \begin{array}{c|c} \log r & r^2 \log r \\ \hline \frac{1}{r^2} (x n_x + y n_y) & (1 + 2 \log r) (x n_x + y n_y) \end{array} \right] \begin{bmatrix} c \\ d \end{bmatrix} = \begin{bmatrix} 1 \\ g \end{bmatrix}$$

