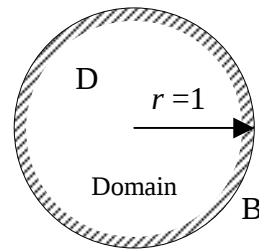


國立台灣海洋大學河海工程研究所無網格法第二次作業

Trefftz method :

$$\nabla^2 u(x) = 0, \quad x \in D$$

$$u(x) = \cos(3\theta), \quad x \in B$$



- (a) By choosing T-complete set, $1, r \cos \theta, r \sin \theta, r^2 \cos 2\theta, r^2 \sin 2\theta$, find the Trefftz solution using the point collocation approach.
- (b) By choosing T-complete set, $1, r \cos \theta, r \sin \theta, r^2 \cos 2\theta, r^2 \sin 2\theta, r^3 \cos 3\theta, r^3 \sin 3\theta, r^4 \cos 4\theta, r^4 \sin 4\theta$, find the Trefftz solution using the point collocation approach.