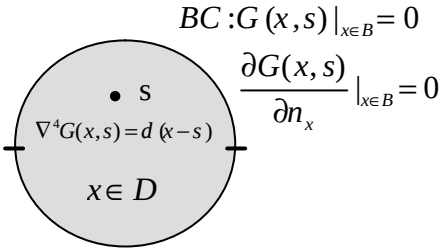
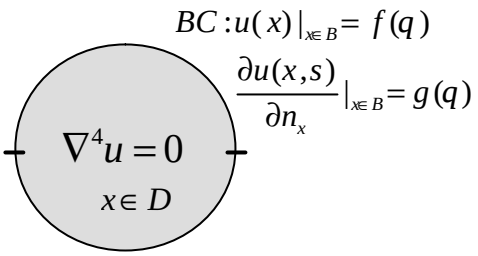
程式 89 Green's function and Poission integral formula for plate



Green's function



1. Find the Green's function by using reciprocal radius if available.
2. Find the image point by using degenerate kernels.
3. Find the degenerate kernel for the Green's function.
4. Construct the Poission integral formula

$$u(x)=\int_B P(x,s)u(s)dB(s)+\int_B Q(x,s)\frac{\partial u(s)}{\partial n_s}dB(s)$$

(1) Using the reciprocal theorem ($P(x,s)$ and $Q(x,s)$ closed form)

(2) Using degenerate kernel, Fourier series and null-field integral equations.
($P(x,s)$ and $Q(x,s)$ in series form)

References:

1. C.S. Wu, Degenerate scale analysis for membrane and plate problems using the meshless method and boundary element method, Chapter 2, Master thesis, Department of Harbor and River Engineering, National Taiwan Ocean University, Keelung, 2004.