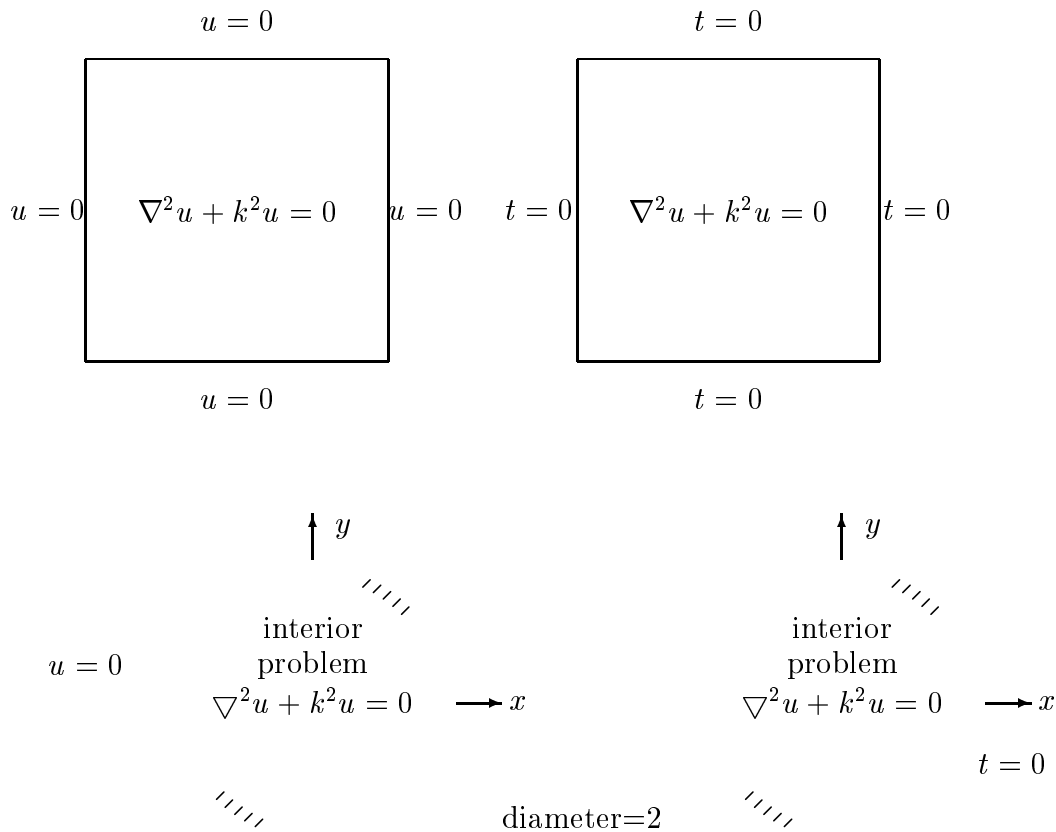


程式9-2 DEGENERATE MODES by SVD



1. Problem statement:
G.E.: $(\nabla^2 + k^2)u(x, y) = 0, \quad (x, y) \in D$
BC: Dirichelet and Neumann, (x, y) on the boundaries
 where $k = \frac{\omega}{c}$.
2. Determine the multiplicities of the eigenvalues by SVD(LINPAK)
3. Find the former five acoustic frequencies
4. Please show
 - (1). BEM mesh
 - (2). Pressure contour for acoustic modes
 - (3). 3-D plot for pressure of acoustic modes
 - (4). The last three singular values versus k , σ_1 versus k , σ_2 versus k , σ_3 versus k .

References

- [1] J. T. Chen, C. X. Huang and K. H. Chen, 1999, Determination of spurious eigenvalues and multiplicities of true eigenvalues using the real-part dual BEM, Computational Mechanics, Vol.24, No.1, pp.41-51. (SCI and EI)