

How to calculate the boundary integrals

YEAR	1994	2000	2001	2003	2005
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Journals	ADVES	JMST	JMST	Kuwait J	EABE
Topics	2-D Laplace equation	2-D 3-D Laplace equation	2-D Helmholtz equation	2-D 3-D elasticity	2-D plate
Remarks	Corner	Smooth boundary	Corner	Smooth boundary	Smooth boundary

**1. Direct integration by using Macsyma (1985) or Mathematica (1992)**

陳正宗, 洪宏基, 1992, 邊界元素法, 第2版, 新世界出版社, 台北, 484面, 本書獲教育部研究生組青年研究甲等獎. P.17-31.

**2. Homework by using series sum (degenerate kernel) (2006)**

**3. Surrounding technique (1994 – 2006)**

1. J. T. Chen and H.-K. Hong, 1994, Dual Boundary Integral Equations at a Corner Using Contour Approach around Singularity, Advances in Engineering Software, Vol.21, No.3, pp.169-178.(SCI and EI)
2. J. T. Chen, S. R. Kuo, W. C. Chen and L. W. Liu, 2000, On the free terms of the dual BEM for the two and three-dimensional Laplace problems, J. Marine Science and Technology, Vol.8, No.1, pp. 8-15. (EI)
3. I. L. Chen, M. T. Liang, S. R. Kuo and J. T. Chen, 2001, Dual Boundary Integral Equations for Helmholtz equation at a Corner Using Contour Approach around Singularity, J. Marine Science and Technology, Vol.9, No.1, pp.53-63. (EI)
4. J. T. Chen, W. C. Chen, K. H. Chen and I. L. Chen, 2003, Revisit of the free terms of the dual boundary integral equations for elasticity, Kuwait Journal of Science and Technology, Vol.30, No.2. (SCI and EI)
5. J. T. Chen, C. S. Wu and K. H. Chen, 2005, A study of free terms for plate problems in the dual boundary integral equations, Engineering Analysis with Boundary Elements, Vol.29, pp.435-446. (SCI and EI)