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Efficient solution of Poisson's equation with free boundary conditions

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(15 2006; 13 2006; 17 2006)

[illegible]

II. INTERPOLATING SCALING FUNCTIONS

$\mathbf{r}_{1,2,3} = ({}_1, {}_2, {}_3)$ ${}_{1,2,3}$

$= (\mathbf{r}_{1 j 2, 3})$,

[illegible] 3 [illegible]

[illegible] 1/8 [illegible]

[illegible] H [illegible] 16

17 ([illegible]) [illegible]

[illegible]

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APPENDIX: PROOF OF EQ. (6)

(6).

$\phi(\ )$

$\rho_{s_1 s_2 s_3}$

$$\rho(\mathbf{r}) = \sum_{s_1 s_2 s_3} \rho_{s_1 s_2 s_3} \phi(\ \ s_1)\phi(\ \ s_2)\phi(\ \ s_3). \quad (\ 1)$$

$$\sum_{s_1 s_2 s_3} s_1^{1} s_2^{2} s_3^{3} \rho_{s_1 s_2 s_3}$$

$$= \int \mathbf{r}\ ^{1}\ ^{2}\ ^{3}\rho(\mathbf{r}) \quad 0 \leqslant\ _1,\ _2,\ _3 < \ . \quad (\ 2)$$

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$$= \int \phi(\ ) \quad = \delta, \quad = 0, \ldots, \quad 1. \quad (\ 3)$$

$$\int \phi(\ \ ) = \int \phi(\ )(\ +\ )$$

$$= \int \phi(\ )\sum_{=0} \quad = $$

(1) (2)